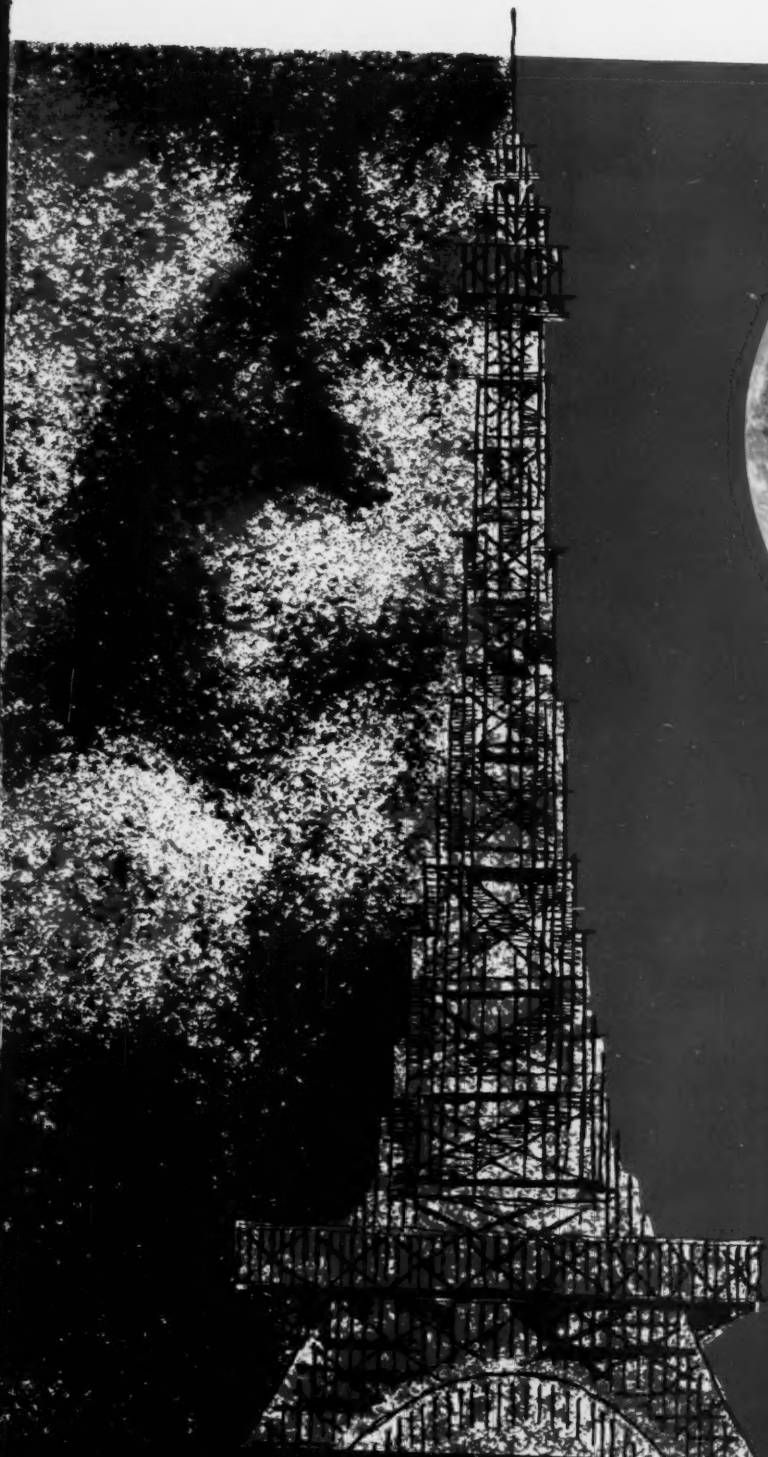
JUNE 23, 1975

Commerce Today



U.S. Success at 1975 Paris Air Show

FROM THE
SECRETARY

A Time For Honesty, Plain Talk

This column is written by Under Secretary of Commerce John K. Tabor.

Andrew Jackson once said, "One man with courage makes a majority."

A recent example shows the truth of this remark: a director for one of the country's top 500 companies recently led a fight to expel corporate management which had admitted illegal political contributions. At first he was alone; gradually, he won allies. Now management has changed and the firm stands taller for having cleaned its house.

Illegal political contributions are not the only problems today. Bribery and political payoffs to representatives of foreign governments by American firms are also repugnant to the American public generally. Equally important, they are becoming increasingly unacceptable to the foreign governments themselves.

We have had direct communications at very high levels with several countries in the Near East. They state their opposition to bribes and to the forms of corruption quite bluntly. They emphasize that whatever may have been the practice in the past, they no longer want bribery today. They state that when they purchase $5 million worth of services or goods, they want full value, not $4.5 million worth with one-half million dollars siphoned off in payoffs to individuals. They state that they resent their own high officials giving a corrupted instead of an honest evaluation on contract awards. Do not be led by the talk that this is still the only way to do business abroad. It isn't and at high levels abroad there is a determination to change.

The attitude of American people toward business and our economic system is very mixed.

One reason for this is the very practices, mentioned above, which recent investigations are bringing to light. Although only a minority of U.S. companies are so involved, the entire system is hurt in the public's mind. This is why American business and industry, through stockholder, director and officer action must eliminate corruption root and branch. It will take courage but it must be done. If business and industry does not clean its own house, Congress and state legislatures will swiftly fill the vacuum left by defaulting corporate leadership.

A second reason for the very mixed opinion American people have towards business and industry is the very great lack of knowledge and understanding of how business and industry and the American economic system work. Pollster George Gallup described this ignorance, on college campuses, as "really frightening."

Thus, two challenges clearly present themselves to American business and industry:

- First, it must put its own house in order.
- Second, it must start inviting people into that house. There must be increased effort on the part of the individual businessman to communicate.

Businessmen must make their successes and contributions to America known; they must make their problems known. They must be shared and passed along. No one can tell the story better than the businessman himself.

The American economic system has produced the phenomenal Gross National Product of $1.4 trillion worth of goods and services a year, double its nearest competitor. It is a system made up of individual parts—millions of decision points—operating relatively freely and independently, yet producing harmonious results. American business cannot and is not obliged to tell the story in a single monolithic voice. The richness of our system is its diversity and freedom of choice, but the men and women of business and industry have to share their knowledge of how it works with others.

Essential to this telling is honesty, the other side of the coin of courage. Communications with the public must be forthright and candid; they must be credible. In business, government, labor and the public at large there has been enough of "cosmetics;" it is now time for solid plain talk.

I mentioned that Americans have mixed views about our economic system. This includes an imperfect awareness that somehow, at its best, the American economic system enhances one's personal freedom. This was brought out by a recent series of interviews conducted throughout the country. Over 3,000 persons, when asked what they liked best about the American economic system, cited the economic, job and social mobility it afforded; the opportunity to earn as much as their ambition allowed; the opportunity to start a company or patent a product; and the fact that initiative, ambition, inventiveness and creativity are encouraged and rewarded.

Yes, there is a mixed attitude toward and by Americans about their economic system. There is cynicism and suspicion of its defects. These must be cleaned out. There is also an appreciation for its strengths, the standard of living it provides, and the subtle way in which it is linked to broader opportunity, mobility and the chance for a better life. This story needs to be told.

All of it will take courage, honesty and candor if the American economic system is to grow in strength and openness, instead of being further restricted by government intervention.

John K. Tabor

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Published biweekly by the U.S. Department of Commerce, Washington, D.C. Annual subscription rate $29.80 ($7.45 additional for foreign mailing, $5.75 additional for domestic air mailing). Single copy $1.15. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce District Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.
Microfiche copy available at $1.45 per issue from National Technical Information Service, Springfield, Virginia, 22151. Other inquiries should be sent to the U.S. Department of Commerce, 14th Street and Constitution Avenue, Washington, D.C. 20230.

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COVER: *Theme of the U.S. Pavilion at the 1975 Paris Air Show was "The Blue Planet" Earth as seen by U.S. astronauts during lunar flights. Exhibit emphasis was placed on the numerous benefits of aerospace technology to mankind. For the benefits to U.S. aerospace industry participants, see story on page 5.*

Swings In Oil Mask Foreign Trade Patterns

Economic Highlights is prepared by James L. Pate, Assistant Secretary of Commerce for Economic Affairs.

The U.S. merchandise trade surpluses in February, March and April of this year were the result of a sharp drop in imports and a smaller decline in exports. The fluctuations in petroleum imports in the first four months of 1975 have tended to mask a general decline in other imports—a response to the downturn of the domestic economy. Conversely, stability in the export sector has not been accurately reflected in the up-and-down movements in the trade balance.

The merchandise trade surpluses were $917, $1,380 and $557 million in February, March, and April, respectively. If imports are calculated on the C.I.F. basis, in which insurance and freight are added to the cost, there are surpluses of $653 and $232 million in February and March, and a deficit of $116 million in April. These trade surpluses indicate improvement, after deficits in eight of the nine preceding months.

It is advisable to exercise caution in interpreting any month-to-month changes in foreign trade figures. Furthermore, in the January-April period large shifts in petroleum imports distorted the monthly trade figures. The distortion began in January when a rapid increase in crude imports, in anticipation of the $1 per barrel supplemental license fee on oil imports on February 1, was sufficient to yield a deficit in spite of a record amount of exports, and caused some distortion in the surplus figures for February and March due to pronounced downturns in petroleum imports in these two months.

In the absence of the January increase in crude oil imports, the trade balance would probably have shown a small surplus in January, and larger but nearly equal surpluses in February and March. This distortion should be over by May since crude petroleum imports returned to a level in April approximately equal to the average monthly import level of the last six months of 1974. The 93 percent April increase in crude imports ($929 million) resulted in a 9 percent increase in total imports in spite of a widespread decline in non-crude-oil imports of $252 million or 4 percent in April.

It is not likely that the increase effective June 1, 1975, in the supplemental license fee on imported oil caused as large an anticipatory increase in imports. Domestic stocks of crude petroleum are at a high level, even above the amounts on hand in the post-embargo period of 1974, and oil imports are now back at more usual monthly levels. If foreign oil prices are increased in the fall, however, there may be further anticipatory increases in imports which could distort month-to-month import figures.

The broad-based decline in imports since the fourth quarter of 1974 should continue through the second quarter. Many econometric models are forecasting quarter-to-quarter percentage increases ranging from about 3 to 5 percent in imports in the third and fourth quarters, but the effect of possible oil price increases makes it a hazardous proposition to pick a number for imports and even more so to predict trade balances.

The export side of the merchandise trade picture also has its sources of fluctuation and uncertainty and aircraft shipments and agricultural prices are important elements to consider in this regard. However, while the merchandise trade surpluses in recent months have not provided an accurate picture of the extent of our trade position there was unusual strength in the growth of exports throughout 1974. Resistance provided by the capital goods sector slowed the rate of export decline in the February-April period of 1975.

The chart on principal export components indicates that the large 11.8 quarter-to-quarter percent increase in the export value of agricultural products led to only a small overall increase in total exports since it was largely offset by an 8.1 percent decline in exports of another volatile element, transportation equipment. An interesting figure in this chart is the small 1.4 quarter-to-quarter percent increase in the important machinery export category, which accounted for 24 percent of total exports in 1974. This important category has been growing in spite of the economic downturns in major industrialized countries.

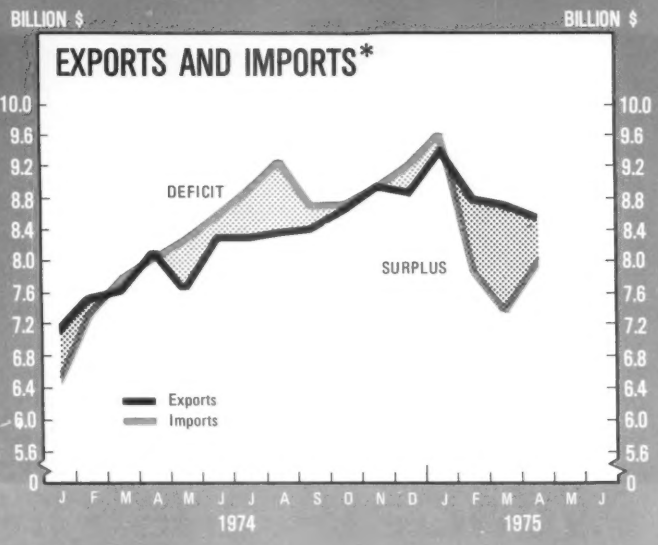
Manufacturers' new export orders for durable goods have shown a strong trend with a 9 percent increase in the first four months of 1975 compared with the same period of 1974. This increase was composed of a 12 percent gain for nonaircraft and a small decline of 2.8 percent for aircraft orders. The past growth in orders, despite a small decline in April, should yield, through the shipments/order lag, modest growth in overall nonagricultural exports in the second and third quarters.

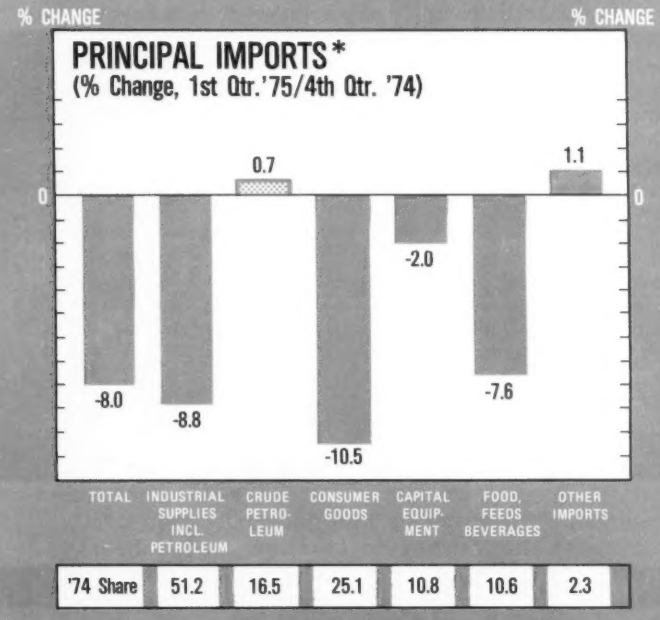
After a record high in January 1975, exports returned in February to a level only slightly lower than December 1974. The subsequent monthly declines were quite modest. Exports increased 16.6 percent in the first four months of 1975 compared to the same period in 1974. This increase consisted of a 10 percent increase in exports to the developed countries in the first four months of 1975 compared to the same period in 1974 and a 34.3 percent increase in the exports to developing countries.

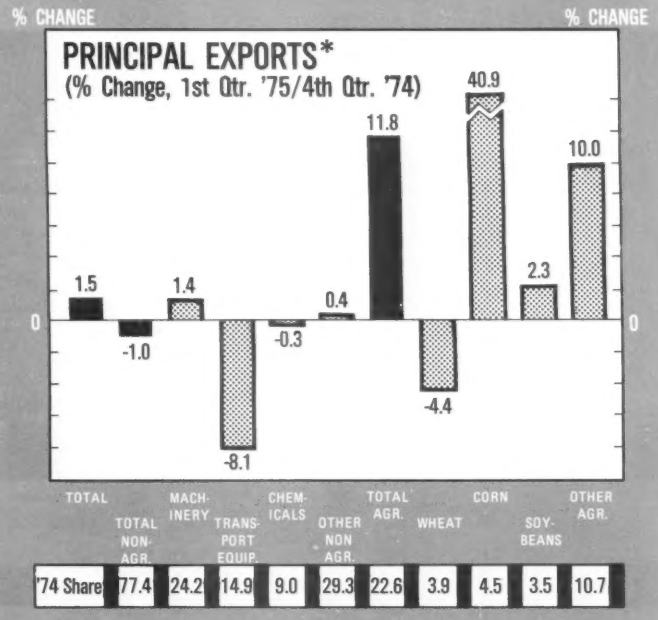
Exports to the oil-exporting countries (excluding Canada) increased 88 percent from a relatively low level in the first four months of 1974 to the corresponding period of this year after a similar increase from 1973. Exports to the non-oil-exporting developing countries, which are normally at much higher levels than the oil-exporting countries, increased 21 percent over the same period. For the latter group of developing countries the high revenues resulting from high commodity prices in 1974 have declined along with prices. However, the resulting improvement in their foreign reserves has made it easier for these countries to find financing and this should allow export growth to these countries to continue in 1975, although at a more modest rate.

The evident impact of developing countries on exports and the strength in manufacturers' new export orders provides some basis for the downward rigidity shown in recent months in nonagricultural exports. There is a reasonable basis for the expectation that durable goods exports will continue to grow slowly for the next one or two quarters.

The outlook for exports in other sectors such as chemical and agricultural products, which showed respective monthly declines of 8 and 4 percent in April, is not as clear. In the case of agricultural products, while the ex-







pected bumper crops would normally lead to increased physical export volume and price declines, the extent of the decline in the total value of exports is uncertain. Several factors affecting the long-term price outlook are the low levels of agricultural stocks, the high level of available storage, and the possibility of lower than expected levels in foreign production. If farmers store part of the crop, price declines may be less than otherwise expected and the upturn in long-term grain and soybean futures provides an indication that the outlook for continued price declines is not universally shared.

The behavior of major trade elements such as petroleum imports and aircraft and food exports were key factors in the merchandise trade balances in the early part of this year and will continue to be important in the remainder of 1975.

* Seasonally Adjusted Data

Newsmemo

For many Americans franchising can be the route into the business world. That is why the Commerce Department keeps revising and re-issuing its "Franchising Opportunities Handbook." More than 550 franchisors in 40 categories are listed in the new ninth edition, available at $3.10 from the Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402 or from any Commerce District Office. The handbook describes the various kinds of franchises, amount of equity capital needed, financial assistance available, training provided and managerial assistance involved. The 204-page publication is particularly aimed at assisting minority groups.

A reminder to print collectors, in connection with the U.S. Bicentennial. A limited number of engraved prints of nautical charts from the original copperplates, dating back to 1845, are being issued by Commerce's National Oceanic and Atmospheric Administration. When the 9,350 prints being offered have been sold, the plates go back to their repository vault as treasured records of a vanished art. The Bicentennial prints have been hand-pulled from a 150-year-old flat bed press. Prices range from $5 to $15 for the approximately 20-by-30 inch prints. NOAA is also issuing an unlimited number of historic lithographic prints. For a free catalog write: National Ocean Survey, Distribution Division (C44), Riverdale, Md. 20840.

From Memphis and the Mid-South to the world. That's the export-boosting message contained in a new adhesive label being affixed to letterheads, invoices and statements by members of the Memphis-based Mid-South Exporters' Roundtable. Seymour Gilman of the Roundtable offers an explanation of the inch-wide medallion label, which shows the Mid-South area highlighted in a U.S. map that in turn is imposed on a globe: "For our member, he is advertising his membership in this organization, the presumed solidity of his company, the implied responsiveness of his products and, obviously, he is advertising the United States and its exports."

Does Michigan or Iowa know what New Jersey or Indiana has done in economic development research? Not always, and that is why the National Assn. of State Development Agencies is compiling a bibliography on such activity, and why Commerce's Economic Development Administration is helping the compilation with a fund grant. The project will help establish a system of solid communication among the states about their development work, help avoid duplication of effort and provide closer links between researchers and state officials. The bibliography will cover research done in the past three years.

"But I bought it in a duty-free store..." is a frequent comment by travelers aghast to learn that they owe U.S. Customs duty on items they have purchased on their trips. U.S. Commissioner of Customs Vernon D. Acree advises travelers—including business executives—to "Know Before You Go." Customs has an explanatory pamphlet with that title. Among other tips, it describes the status of goods bought in U.S. or foreign duty-free stores, and their relation to the $100 duty exemption granted to all U.S. residents. Copies are available at all Customs offices or by writing the U.S. Customs Service, P.O. Box 7118, Washington, D.C. 20044. And local Customs offices are always ready to answer individual queries by phone so that travelers may "know before you go."

The bright yellow lapel button has an arrow turning on itself and one word: TURNAROUND. There are 40,000 now visible around the country; it all started with a remark at a sales meeting of the Hyster Co. of Portland, Ore., maker of forklifts and other handling equipment: "You can't wait for someone else to do something about the economy or your future. You've got to make it happen." The upshot has been hundreds of suggestions on how to be more productive and profitable, by the production staff at Hyster. Looking at the overall impact, a Hyster official comments: "If we achieve only 50 to 75 percent of our Turnaround goals, we will still be infinitely better off than if we had backed off and waited for the recession to go away."

A first move has been made to develop an accurate nationwide picture of our fire problems. It came with the awarding of a data gathering contract by Commerce's new National Fire Prevention and Control Administration. The contract went to the National Fire Protection Assn., a Boston-based non-profit group with 33,000 members. The resultant six month collection of fire incidence data will be the first step in establishing a fire data collection and analysis system. The Fire Administration's ultimate goal is to cut the nation's fire losses in half in the next generation.

Commerce Today
Vol. V, No. 19
June 23, 1975

Dramatic F-16 Purchase Leads Way To U.S. Success At Paris Air Show

THE "rendezvous" of the '70s is the term now used in industrial and design engineering circles to describe the recent Paris Air Show, where the American F-16 fighter plane shared flightline attention with France's F-1E Mirage. Competitive excitement crackled until the next-to-final day of the show, when the Belgian decision was announced to purchase the General Dynamics plane rather than that of Marcel Dassault.

Against this background the American firms participating in the U.S. Pavilion at the show added their own note of success with a sales total that topped those of the four previous Pavilion efforts.

The exhibitors in the Pavilion reported $2.84 million in off-the-floor sales and predict $92.8 million in sales during the next twelve months. The Paris Air Show also provided an additional group of exhibitors with the opportunity to further develop and potentially conclude negotiations that had been in progress. These five U.S. companies expect extraordinary sales during the next 12 months that will amount to an additional $97 million as a result of their participation.

Sixty-seven companies, adding their products to a major display by the Federal Aviation Administration, were represented in the Pavilion. According to data compiled by the Department of Commerce from the exhibiting companies, avionics and airborne instrumentation again brought the highest sales.

Six major product categories were included in the U.S. Pavilion. Avionics and airborne instrumentation, with 29 exhibitors, recorded 20 percent of floor sales and 46 percent of all projected sales.

The next highest sales were in airport and ground support equipment with nine companies reporting $700,000 in off-the-floor sales and $24.5 million in 12-month sales forecasts.

The 15 manufacturers of aircraft and aerospace components sold $800,000 during the show and expect an additional $9.5 million in sales over the coming year.

While the three airframe manufacturers

THE WINNER—*During the Paris Air Show, Belgium announced its decision to replace its 15-year-old F-104s with the U.S.-built F-16 rather than the French F-1E Mirage. Four NATO allies—Belgium, Norway, Netherlands and Denmark—have ordered 306 of the General Dynamics fighters and have options on 42 more. Discussing the $3.2 billion sale are (from left) General Dynamics pilot Neil Anderson, U.S. Ambassador to France Kenneth Rush, French President Valerie Giscard d'Estaing, Mirage producer Serge Dassault.*

THE 1975 PARIS AIR SHOW—*The 31st Salon International de l'Aeronatique et de l'Espace was held May 30-June 8 at Le Bourget Airport. U.S. Pavilion is at right behind terminal buildings. On the flightline the U.S. display begins at far left and extends from view.*

BRIEFING FOR EXHIBITORS—*John O. Blodgett, Counselor for Commercial Affairs at the American Embassy in Paris, is shown addressing the representatives of participating firms.*

project $5.5 million in sales during the next 12 months, the four aircraft engine and parts participants expect $4.2 million and the three metals and materials manufacturers estimate $2.1 million during this same time frame.

This year, two new product categories —aerospace services/consulting organizations and survival/rescue equipment—included six firms that reported $800,000 in off-the-floor sales and a total of $3.4 million in one year sales projections.

Forty-nine exhibitors were new to the European market and obtained 279 strong sales leads. Seventeen of the new-to-market exhibitors, in addition to several of the old-to-market exhibitors, sought agent licensee or joint venture agreements. During the show, 42 actual agreements were concluded and an additional 154 such agreements are expected during the next 12 months.

Exhibitors commented favorably on the high quality of business contacts that were generated by the marketing efforts of the Department of Commerce. "The exposure to new business prospects which we have received during this Paris Air Show could not have been duplicated by our sales force in less than one year, plus travel time and expense equal to 100 times that expended here," said R. A. Hollingsead, president of Hollingsead-Pryor Enterprises, a new-to-market exhibition participant that obtained 64 new sales leads.

John A. Ohanian, director of marketing for Aviation Sales International Corporation, indicated that his company had penetrated eight new country markets in-

MULTI-COUNTRY DEAL—*A German customer negotiates with a Swiss-based representative for an American firm at the French show site. Heinrich Bauer (left) of Bauer Verlag, Hamburg, shakes hands with R. H. Anselm, European operations manager for Gates Learjet.*

AIRCRAFT PLASTICS DEMONSTRATION—*Polyplastics United, Inc., shows business visitors its custom-made laminated plastic decorative interior fittings for aircraft. The Union, N.J., firm has outfitted all major U.S. airliners, the European Airbus and Concorde.*

cluding Middle East countries at this year's show.

Swedlow, Inc., an exhibitor in the U.S. Pavilion for four Paris Air Shows, obtained 50 new sales leads and penetrated three new markets. Ken Granger, vice president of marketing for Swedlow, explained that "the Paris Air Show gives us an excellent opportunity to display hardware and meet technical and commercial customers."

New-to-market exhibitors were impressed with the exposure to both new markets and new contacts as well as the opportunity to test the market.

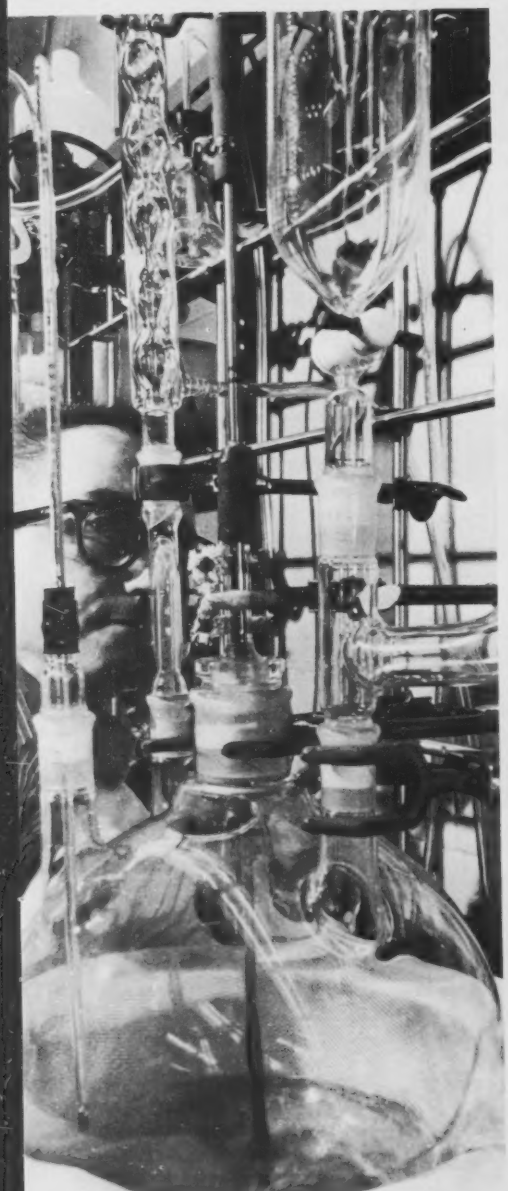
Attendance figures for the U.S. Pavilion paralleled a discernible trend at this year's show which stressed the commercial image over the public display. There were 6,470 registered business visitors to the U.S. Pavilion. This represents a 100 percent increase over the 1973 attendance figure. Public attendance in "La Planete Bleue," the thematic section of the Pavilion, was estimated at 155,000, representing a 50 percent decline from 1973. The overall public attendance to the Air Show was also off by about 50 percent indicating a trend toward the exhibition becoming more of a marketing showcase and less of a public spectacle.

Among the business visitors to the U.S. Pavilion, 2,786 were from France, 609 from West Germany, and 568 from Britain. Other totals were: Italy, 328; Scandinavia, 242; Switzerland, 168, Belgium, 164; the USSR and Eastern Europe, 158; Middle East, 151, and Africa, 72.

AIRBORNE COMPUTER—*Representative of IBM Federal Systems Division describes to a visitor a computer application as installed among the instruments in an aircraft cockpit.*

WELCOME TO SOVIET COSMONAUTS—*U.S. Astronaut Col. William Pogue played host to Soviet cosmonauts Gubarov (left) and Gretchko (right) and also visited the Soviet Pavilion.*

Should Environmental Protection Stand Aside For Economic Health?



LOOKING FOR ANSWERS—*This scientist at a PPG research center is developing water reducible coatings, which would greatly reduce use of solvents, thus cutting off one form of pollution at the source.*

This nation is commited to protecting and improving the environment. The nation is equally committed to promoting a growing and stable economy.

To balance these objectives requires that the benefits derived from specific environmental policies must be weighed against the costs, both short and long-term, they will create for the producing and consuming sectors of the economy.

To help find the proper balance between environmental and economic objectives, the Office of Environmental Economics was recently created in the Department of Commerce.

Headed by Robert T. Miki, the Office is charged with helping the Federal Government assess—more adequately than it is now doing—the economic consequences of its environmental actions.

The Office conducts short and long-term economic analyses of environmental proposals and actions, particularly (a) their benefits and costs, (b) their impacts on industries, on communities and regions, and on national economic performance, and (c) their relationship to other federal policies.

Internally, these analyses contribute to the formulation of Commerce's position on environmental issues; externally, they provide inputs to administrative decision-making by the Office of Management and Budget, the Council on Environmental Quality, the Environmental Protection Agency, and other federal agencies.

The office coordinates, advises and reviews environmental economic research and related activities within the Department of Commerce.

Environmental protection vs. growth?

Miki cites two important aspects of the interface between pollution control and economic growth: whether or not pollution control expenditures fuel inflation, and whether they adversely affect productive capacity by creating shortages of materials, hampering productivity, and slowing down the growth of industrial capacity.

An article in *Fortune* magazine exemplifies one view, namely that:

> "The war against pollution has begun to cut into consumer purchasing power in all sorts of direct and indirect ways. All those sewage treatment plants mean higher taxes, while consumers will be paying for effluent controls at steel mills, chemical plants, paper mills, and other manufacturing plants."

On the other hand, bodies such as the Council on Environmental Quality (CEQ) and the Environmental Protection Agency (EPA) conclude that:

- Pollution control expenditures are not responsible for our current problem of inflation.
- Environmental protection will cost $195 billion from 1973 through 1982 as a result of federal environmental legislation. This is between 0.7 percent and slightly over 1.0 percent of each year's projected gross national product.
- It is false economy to sacrifice goals of clean air and water for the sake of a federal budget saving, which in fiscal 1975 would amount to one-fifth of one percent of total budget authority.

Pollution control costs have frequently been indicted as one of several major elements contributing to our recent inflation. They have not been a major element in inflation, Miki reports, but they have been one source exerting pressure on prices, capacity, and supplies.

The more crucial concern is that in the years ahead pollution abatement and control requirements, promulgated without due regard for their benefits and costs, will make it more difficult to maintain a growing and stable economy.

In particular, Miki cites effluent control requirements under the Water Pollution Control Act of 1972, which began to be promulgated in early 1974, represent additional costs to be incurred, capital to be obtained, and revenues to be diverted by industry to meet "best practicable control technology" (BPT) by 1977 and "best available control technology" (BAT) by 1983. The full effect of these requirements has yet to be felt.

Thus, while pollution control requirements—so far largely in the form of the Clean Air Act—may not have contributed significantly to price increases, their significance will grow in the future as air, water, solid waste, noise, and related regulations, such as occupational safety

and health, taken together increase industry's cost of operation.

Federal pollution control and abatement authority in fiscal 1975 amounted to only one-fifth of one percent of total budget authority ($700 million out of a total $322 billion authority). However, federal expenditures for pollution control and abatement amounted to $4 billion in fiscal 1975, that is 1.3 percent of total federal expenditures of $305 billion. This is still a small part of the total federal budget.

But, the environment portion of the budget may not fully reflect the added program costs under other budget categories caused by adverse effects of environmental regulations upon communities, industries, and persons, Miki notes.

In the larger picture, the potential impact arises not from pollution abatement expenditures in the public sector, but from abatement expenditures required by the private sector. Four out of every five additional dollars spent on pollution control will come from industry. Large expenditures by industry for nonproductive investment will undoubtedly affect the pace of overall economic growth.

SHARING THE KNOWLEDGE—*Autotrol Corp.'s John McNeil (at right) explains the workings of his firm's Bio-Surf water treatment system to (left to right) Francisco Bonsignore of Turin, Italy, Carmen F. Guarino, Commissioner of Philadephia's Water Department, and Giancarlo Siena of Milan, Italy. Italian officials were in this country to investigate the latest U.S. techniques and products in the field of water treatment.*

The costs

Estimates of capital expenditures for pollution abatement and control in 1974 and expenditures expected in 1975 were released recently by the Department of Commerce. These estimates cover all U.S. businesses (except agricultural businesses; real estate operators; medical, legal, educational, and cultural services, and nonprofit organizations).

Miki points out that capital expenditures are only part of the costs of pollution control. Operating and maintenance costs are a very important part of the total cost picture. Our knowledge of these costs is, as yet, quite limited. We do not have current estimates of operating and maintenance costs by industry.

In 1974, $5.2 billion was spent on air and water pollution abatement capital goods: $3.3 billion (63 percent) was for air and the balance of $1.9 billion (37 percent) was for water pollution abatement. An additional $400 million was spent on solid waste disposal, making a total of $5.6 billion in capital expenditures for environmental protection.

Actual air pollution control expenditures were $1 billion less than expected; while water pollution control outlays were $300 million less than expected.

The pattern of expenditures for industry in general shows that actual air and water capital expenditures have lagged behind what was expected. This is not surprising in light of the promulgation timetable for effluent guidelines, according to Miki.

The Council on Environmental Quality estimates that cumulative incremental pollution control expenditures for the period 1973 to 1982 amount to $194.8 billion in constant 1973 dollars. Of this total, $32.7 billion (17 percent) is public expenditures and $156.8 billion (80 percent) is private expenditures. The total includes operating, maintenance, and capital costs. The water costs include state and local expenditures but not the costs associated with federal effluent guidelines. The remaining $5.3 billion expenditure (3 percent) is for land reclamation, radiation, and noise.

Such projections of aggregate costs are tenuous for a number of reasons:

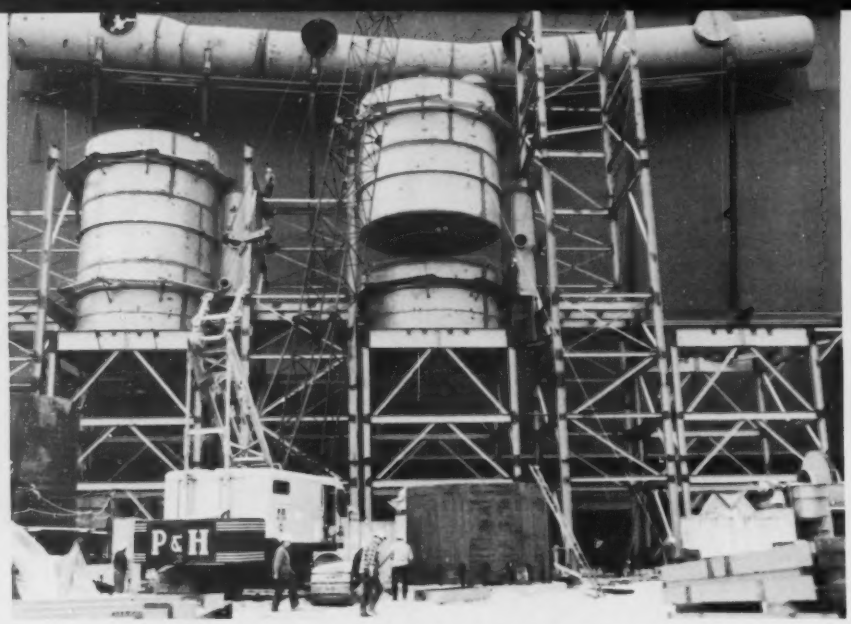
- Effluent guideline costs have not been fully taken into account because the effluent guidelines for the first set of industry categories were only recently promulgated and those for many other categories have yet to be promulgated.
- The costs to some industries resulting from pretreatment, New Source Performance Standards, and other water-related requirements have yet to be ascertained. The costs of other regulations, such as smelters, solid wastes, and noise must also be calculated.
- Air, water, solid waste, and noise regulations have been compartmentalized. Partial and fragmentary estimates of costs within each compartment have been made. But, the *combined* costs to industry of all environmental regulations have not yet been determined. EPA is in the process of determining the overall economic impact of air and water regulations on six industries—steel, electric utilities, nonferrous metals, petroleum refining, chemicals, and pulp and paper.
- The legal status of many of the effluent guidelines enacted is unsettled.
- There is considerable uncertainty in process management and investment planning in light of the piecemeal nature and the timing of environmental regulations. The pattern of promulgation of environmental regulations is like a jigsaw puzzle with many pieces still to be fitted in.

Domestic ramifications

Analyses of environmental regulations underplay the total impact because they do not take into account the multitude of factors which operate through the network of industries to affect the overall operation of the economy.

For example, effluent guidelines that affect the production of organic chemicals will have a decided impact on fertilizers, plastics, tanning, and many other industries, which are themselves subject to specific effluent guidelines. If synergistic effects are taken into account, as should be done, the total impact of pollution abatement requirements will be larger and of a different nature than if the separate impacts on each industry are added up.

Some changes in the structure of industry will result from pollution control regulations. In some industries, small producers will hasten plant closings and production will be carried out by fewer, larger producers. There will also be shifts in the mix of products made. The extent to which such changes in the number, size, characteristics, and geographic location of producers affect the operation and



PAYING THE BILLS—*The Council on Environmental Quality estimates that almost $195 billion will be spent on pollution control in the United States between 1973 and 1982. About 80 percent will be private expenditures. Above, wet scrubbers are installed to prevent air pollution from a basic oxygen furnace at Bethlehem Steel's Burns Harbor, Ind., plant.*

direction of the economy is unknown.

Considerably more attention must be given to the capital which industry needs to meet environmental regulations. It is not sufficient to presume that capital will be available to finance effluent control facilities because in the past financing was available, good cash earnings were experienced in selected years, or other circumstances were favorable to a particular firm or group of firms.

With increased demand for capital to finance capacity growth, as well as increased demand for capital to meet environmental and other government imposed requirements—both federal and state—what are the prospects for any particular sector of an industry, and especially the smaller firms in that sector, to obtain sufficient capital? Any one firm may be able to obtain capital, if there is no substantial increase in demand by other firms. The industry as a whole will need to obtain capital in the light of competing demands by other industries. This, of course, will affect the ability of any one firm to attract capital.

Unless one assumes that there will be unlimited capital to finance the replacement, modernization, and expansion needs of industry, and also to meet environmental requirements, there is more than an even chance that financing difficulties will arise.

In some industries, growing pollution abatement expenditures have manifestly contributed to a slowdown in the growth of productive capacity.

In this connection, the Council on Environmental Quality has cited a Commerce Department survey which found that only 2 percent of firms surveyed reported that pollution abatement and control outlays had curbed their investment programs. This attribution is misleading. The survey was taken in November-December 1973, prior to the promulgation of effluent guidelines, and therefore does not include probable expenditures associated with effluent requirements.

Furthermore, Miki points out that the survey did *not* say that only 2 percent reported a curb on their investment programs. The other 98 percent included those who reported that pollution outlays had not curbed their investment programs, those who did not answer that question, and those who indicated "NA" (not available or not applicable). It should not be concluded that pollution control outlays have only minimally affected investment programs.

When industry's environmental bill is added up, Miki expects it to be higher than has been surmised.

If so, will environmental costs impair the competitive position of American industries in international trade?

International aspects

Changes in international trade and investment patterns may result from any of the following situations:

- Countries producing competitive products pursue differing pollution control policies with regard to the final product, the production process, or the method of assigning pollution costs;
- Production processes, costs, and final product prices change as a result of pollution control measures;
- Costs of pollution programs are borne by the governments in certain countries and by the private sector in other countries;
- Countries having regulations or standards less stringent than others provide locational opportunities for expansion by polluting industries, and
- Countries have differing timetables for the implementation of standards; thus, the phasing of costs will differ over time.

Miki says that studies of heavy polluter industries, which account for products which are widely traded internationally and which will incur high pollution control costs, suggest that environmental regulations have had little impact on U.S. trade as yet. Due to the complexity of industrial pollution abatement processes and the lack of adequate domestic and foreign cost data, there is little empirical verification that international trade and investment patterns have been adversely affected.

This is not to say that there is no effect. However, the impacts, both aggregate and at the industry level, are at present unknown, uncertain, or small relative to the impact of other factors.

In particular, in recent years international monetary affairs, cartel energy policies, labor cost differentials, materials availability and costs, and location-specific characteristics have been considerably more significant to world trade than environmental regulations.

To date, no changes in trade and investment patterns resulting from pollution control cost differentials among producers have been identified, and not one country has requested consultations with another under established Organization for Economic Cooperation and Development consultation procedures.

Detectable effects could show up as more is learned about the costs of converting production processes and modifying products to reduce pollution, and as pollution control requirements are implemented by more countries.

Conclusion

Fundamental to the promulgation of environmental regulations is a careful assessment of the potential economic impacts of the specific regulations on individuals, as reflected in prices, incomes, and employment; on productive units, as reflected in their ability to carry on business; on the community, as reflected in community income and employment; and on the economy, as reflected in the growth in capacity and in the ability of the United States to compete internationally.

The consequences of erroneous actions or judgments *now* must be weighed against their future consequences, Miki reminds us. If the consequences of inaccurate assessments of economic impact are to be minimized, it should be done through the formulation of environmental regulations ahead of the event, rather than by making adjustments after economic dislocations appear.

Industry's Raw Material Supplies Affected By Import Dependence

Following in the wake of the oil embargo and higher oil prices, concern has arisen over U.S. dependence upon offshore sources for certain basic industrial materials based on the possibility that the oil cartel would serve as an example to others. Impetus was given to this concern by the worldwide economic boom which resulted in unprecedented demand for most basic industrial commodities and gave rise to shortages and skyrocketing prices.

In many cases the fear of potential cartelization is unfounded, says James M. Owens of Commerce's Office of Business Research and Analysis (OBRA). In others, however, he admits that the threat is very real and justifies concern over this country's import dependency and consequent vulnerability to disruption of supplies and higher prices.

For the most part, the United States is a resource-rich nation, with economic sources of most basic materials required by its economy. Its complex industrial structure has also fostered the growth of a strong and viable recycling market, enabling secondary sources to contribute significantly to supplies of most materials, says Owens, who heads OBRA's Materials Division.

However, including the contribution made by secondary recovery, the United States must import:

—All of its metallurgical grade chrome and manganese requirements;

—Virtually all of its cobalt, mica, platinum-group metals, columbian, tantalum, and rutile; and

—The bulk of its nickel and tin needs.

—Bauxite, historically the economic source of aluminum, which, along with alumina, is imported by domestic aluminum producers.

Owens cites still another list: those commodities for which economics have dictated increasing dependency upon imports, despite relatively rich domestic resources. In this category, a variety of factors—including cyclical demand, competition from lower-priced imports, plant obsolescence and the cost of pollution abatement—have contributed to diminish domestic productive capability. Ironically, this has increased the vulnerability of U.S. consumers to supply and price squeezes in periods of strong demand.

Zinc must be at the top of this list. The closure of more than half of U.S. smelting capacity since 1970 has created a dependence on imports for nearly 40 percent of domestic metal requirements, or more than 50 percent of U.S. demand if imported metal and ores are combined.

Titanium sponge should also be considered in this context. Highly cyclical demand and dependence by independent ingot-makers upon imported and historically lower priced sponge have contributed significantly to discouraging new domestic capacity.

Ferroalloys threatened

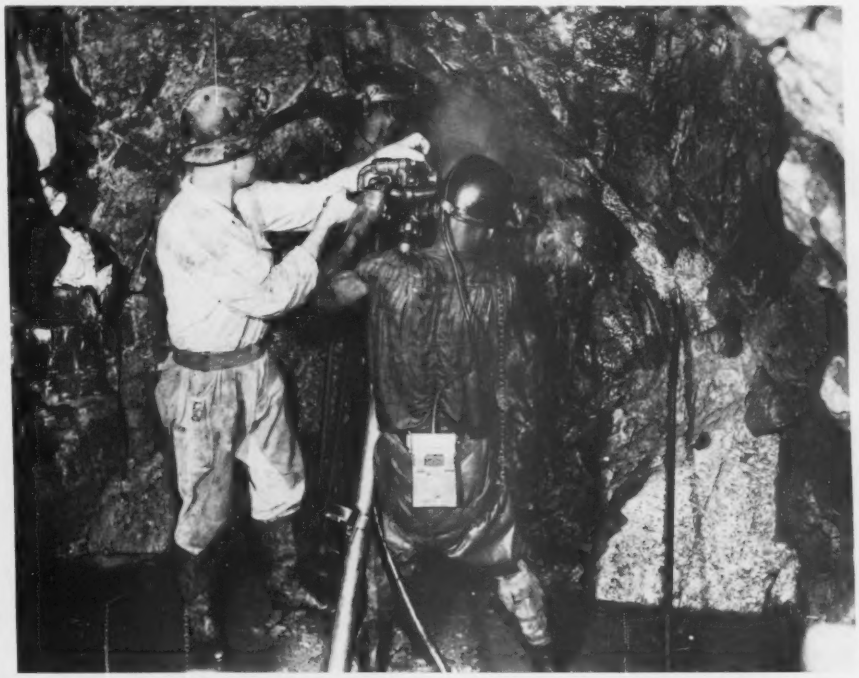
The U.S. capability to produce ferroalloys — particularly ferrocrome — is threatened, largely as a result of soaring costs of imported ore, energy, labor, and pollution control equipment, combined with severe competition from lower-priced imported alloys during past periods of weak demand. Thus, dependence on offshore alloy sources has skyrocketed.

Finally, this country depends on imports of tungsten, where the extreme cyclical nature of prices creates uncertainties for domestic mines, as well as for mercury, where a once-thriving domestic mining industry has all but vanished due to the sharp decline in prices and demand that accompanied mercury poisoning fears and environmental regulations in recent years.

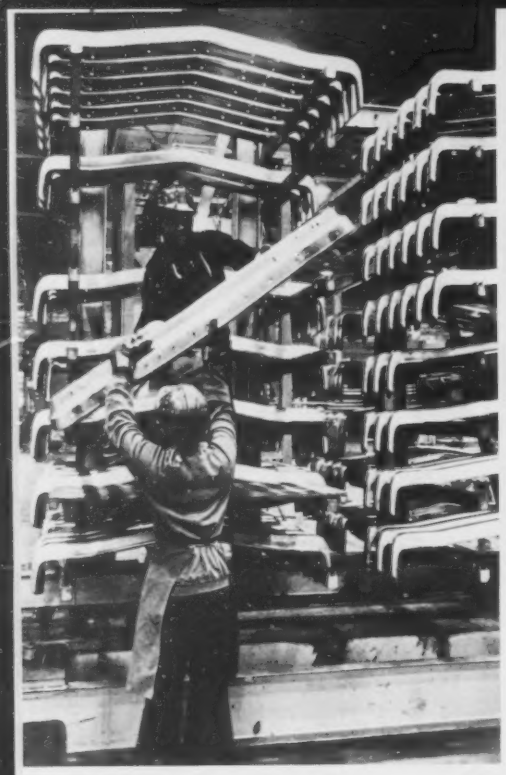
These factors show that concern over offshore dependency should not be limited to the threat of cartelization alone. In fact, despite the growing number of producing-country organizations in the last 12 to 18 months, this threat is only one among many factors affecting offshore supplies to this country.

For most basic raw materials, a host of other factors—many of them interrelated—would seem likely to have more significant impact upon future supplies. To list only a few, these include:

• Political considerations affecting materials with production concentrated in



AT THE SOURCE—*Rhodesian miners at work. Political considerations affecting materials with production concentrated in a handful of countries are seen as a more significant problem affecting U.S. raw materials supplies than cartels of producing countries.*



EXCEPTIONAL GROUP—*The International Bauxite Association has developed a strong possibility of limiting world supplies of bauxite, the source of primary aluminum. Above, workers handle aluminum bumpers which have recently gained growing acceptance in the U.S. auto industry.*

a handful of countries. Here chrome, in the form of both ore and alloys, provides the prime example, with the principal sources of metallurgical grade ore being Rhodesia, South Africa, and the Soviet Union;

- The current trend of economic nationalism in both developing and developed countries, affecting attitudes toward foreign investment in raw materials production, export policies for raw materials, and an increasing desire to produce and export value-added products. This is likely to have a two-pronged effect, impacting on raw materials availability, as well as on the competitiveness of U.S. manufacturers of refined metal and intermediate products; and
- The uncertain investment climate created by government tax policies, by the extremely cyclical raw materials markets, the recent inflationary spiral which has dealt a heavy blow to both investment and operating costs, and the availability of capital to finance new raw materials capacity. This uncertainty has been compounded by the present soft world demand for nearly all industrial commodities, which is causing widespread production curtailments and delays in new capacity expansion.

In terms of more direct vulnerability of offshore supplies, Owens called attention to the many intergovernmental organizations that now exist to promote the interests of countries exporting raw materials, with varying degrees of effectiveness. In addition to the Intergovernmental Council of Copper Exporting Countries (CIPEC), which has been operating since 1968, and the International Tin Council (ITC), a producer-consumer organization that has functioned under four successive agreements since 1956, these ranks now include producers' groups for mercury, iron ore, potash, rubber, bauxite and tungsten.

Still, the geographic and political disparities of the members of these groups, a frequent inability to control an effective share of the world supply, and the temptation for individual members to undercut joint supply-price actions have for the most part diminished the effectiveness of these organizations in controlling supplies or prices.

However, an exception must be made for the effectiveness of the International Bauxite Association.

In 1974, an interagency review was made of 19 industrial materials to determine the potential for cartel-like supply or price action, to identify possible supply risks, and to examine the impact of such action on the U.S. economy and national security.

Special report

The results of this effort were published by the Council on International Economic Policy (CIEP) as a *Special Report on Critical Imported Materials.* The report found significant supply vulnerability in three materials: bauxite, chrome, and platinum.

Regarding bauxite, the establishment of the International Bauxite Association in March 1974 and subsequent action by the Jamaican legislature to raise bauxite taxes and royalties by 500 percent, have made the threat of joint producer control over supply and price very real in this commodity, the source of primary aluminum. Concern over vulnerability and the higher bauxite prices have spurred interest in utilization of previously uneconomic, nonbauxitic aluminum ores and clays found domestically. Research to improve the economics of this technology is being conducted by domestic aluminum producers individually, as well as jointly with the U.S. Bureau of Mines.

The bauxite problem is compounded by the growth in recent years of alumina production in bauxite-producing countries and by the desire of bauxite-producing countries to move into primary aluminum production.

On the bright side, however, it is important to note that more aluminum is being recycled and that secondary aluminum has been making an increasing contribution to supplies, and is especially important in one of the industry's principal growth markets—casting alloys for automotive applications.

Chromium should certainly stand near the top of any ranking of potential problems, according to Owens. Metallurgical grade ores of chrome—the metal essential for the production of stainless and alloy steels used in countless industrial, consumer, and energy-related products that are necessary to U.S. economic well-being—are concentrated in South Africa, Rhodesia, and the Soviet Union. Despite some effort to reduce the use of chrome, in the final analysis, there is no real substitute for this material!

Concentrated reserves

With platinum, the concern over offshore dependency centers on the concentration of reserves and production in South Africa and the Soviet Union, from which this county obtains all of its requirements for metals in the platinum group, many of which are of vital importance to chemical, energy-related, and electronic applications.

Platinum's principal importance lies in its use as a catalyst for petroleum refining—a use that is expected to grow along with the desire to improve refining efficiency as well as with the requirements for phasing out the lead content of gasoline. The major thrust in demand growth, however, is likely to come from the use of platinum-palladium catalytic converters installed by automakers to meet exhaust emission standards.

On the supply side, considerable progress has been, and continues to be, made in recovering so-called "spent" catalysts from chemical and petroleum uses, with restoration for reuse. Similarly, after an anticipated massive requirement for automotive converters, most analysts anticipate large-scale recovery of the high-priced platinum from junked cars containing noble metal converters.

Aside from the three materials singled out above for concern by the Council on Economic Policy, Owens mentions some other commodities where an awareness of U.S. import dependence is important:

- Manganese, basic alloying addition irreplaceable to the production of virtually all grades of carbon and alloy steel; major supply sources are Brazil, Gabon, Australia, South Africa, and Ghana;
- Tin, primarily used in tin-plate steel and solder; supply is controlled by the International Tin Council, which includes consuming and producing countries. Although the United States has a small metal production in Texas City, Texas, and some concentrate output as a by-product of molybdenum and tungsten, it is largely dependent upon Malaysia, Thailand, Bolivia, and Indonesia for primary metal, while secondary sources provide about 20 percent of the needed supplies;
- Nickel, used in stainless and alloy steels, as well as in plating applications

and copper-nickel alloys. While this country must import the bulk of its supplies—except for a relatively small U.S. ferronickel operation and recovery from stainless and alloy steel scrap—it should be noted that Canada, the major source, is considered a stable source of supply;

- Rutile, the ore from which we extract titanium tetrachloride, and, in turn, produce titanium metal and titanium pigments. While the traditional U.S. source has been Australia, rising world demand and environmental constraints in that country are increasing the vulnerability of this important material. Although considerable work has been done in the area of beneficiating, or upgrading, ilmenite ore—found in the United States—most of the effort has been aimed at the pigment market, not metal;
- Owens points to the effects of U.S. offshore fuel dependency upon the availability of feedstocks for petrochemicals such as synthetic rubber, plastic materials, and synthetic fibers. Synthetic rubber is in itself a hedge against possible foreign restriction of natural rubber;
- And, with limitations on domestic supplies of natural gas, the United States may become partially dependent on foreign sources of nitrogenous fertilizers.

The need to reduce this country's dependence for energy is well known and the importance of increasing energy self-sufficiency is hardly disputed. Similarly, there has been considerable agreement on the need for reducing U.S. overseas dependence in certain basic materials, or in hedging supply vulnerabilities wherever possible.

Significant work is being done in seeking substitutes for basic materials, where possible, or reducing usage, where feasible. Interest has similarly been growing in the area of conservation.

In the energy area, the Department of Commerce has been operating a highly successful voluntary conservation program.

Official and public interest in the area of resource recovery and recycling has also grown substantially in recent years, and we may point with pride to some very solid achievements that have been made in recovery technology, improving the economics of recovery and in understanding the nature of the recycling markets. One very promising gain, for example, lies in the marketable use of combustibles from solid waste disposal units as a fuel for utilities.

However, except for resource recovery, very little in the form of a national conservation effort aimed at saving materials has been undertaken to date.

Also, a great deal more needs to be known, other than in general terms, about the interacting effects of various materials and energy programs and proposals to deal with the problem of offshore dependency.

OLD TIMER—*The International Tin Council, a producer-consumer group, has been functioning since 1956. Here some Malaysian tin is readied for shipment to the U.S.*

Some of these unknowns have already been explored to some extent. The Federal Energy Administration, for example, has made considerable progress in attempting to project materials requirements to meet the goals of Project Independence, with the main thrust of this effort aimed at steel for drilling rigs, oil country tubular goods, storage capacity, and mining equipment.

Obviously, we should be aware of the raw materials requirements to produce this steel—such as iron ore, scrap, coking coal, manganese, and other materials, some of which may be imported.

Energy requirements

Furthermore, this country's decision-makers should be cognizant of the materials requirements for more advanced energy sources, such as the vast amounts of zirconium tubing required for nuclear plants, and the sharply increased materials requirements for the more long-term breeder reactor program. The Energy Research and Development Administration has done some initial investigation in this area and has commissioned an independent study of these requirements and the constraints they impose.

Countless other trade-offs exist between energy and materials. Just as an example, widespread adoption by the automotive industry of lighter-weight aluminum or possibly magnesium to improve fuel mileage would entail an added cost in consumption of more energy-intensive materials. On the other hand, however, the use of secondary aluminum, a supply source for automotive applications, would have an energy-saving impact, as does the use of all secondary materials.

Import-dependent platinum provides one of the most interesting examples of a metal that is deeply interrelated with other national goals. The interactions of reducing offshore oil dependency, improving petroleum refining capacity, and improving the environment through automotive exhaust emissions standards are likely to significantly impact upon U.S. platinum demand. These interacting forces affecting platinum involve countless uncertainties that are impossible to predict.

As a final note, it is essential to remember the potential problems posed by any and all of this country's materials/energy supply proposals.

—A beneficial action in one sector could easily have an offsetting cost in another. Widespread substitution out of one material to prevent a supply shortage of another might easily cause problems with another which is in equally short supply.

—Large-scale materials conservation efforts, such as curbing machining wastes or enhancing product life might disrupt the normal flow of supplies from industrial or consumer scrap sources.

For all of these reasons, Owens urges that U.S. materials conservation and substitution efforts be considered in the total context of materials utilization. And, by the same token, he advocates considering all policies aimed at reducing offshore dependency in the light of their impact upon the overall economy.

Energy Management Digest

GASIFICATION MILESTONE...The Energy Research and Development Administration (ERDA) reports that, for the first time, a pilot plant for converting coal to synthetic gas has been operated on a self-sustained basis, without the use of supplemental heat. The achievement occurred in Chicago at the HYGAS pilot plant operated for ERDA by the Institute for Gas Technology. The entire plant was operated by using only steam-oxygen gasification to supply the necessary heat for reaction as well as to produce the end-product of hydrogen-rich gas, which was indistinguishable from pipeline gas. It was 96.5 percent methane and 3.5 percent hydrogen, with a heating value of 970 BTU/cu.ft. This is suitable to heat homes and fuel gas stoves.

HYDROGEN FUEL TOPICS...A 216-page special publication of the National Bureau of Standards' Cryogenics Division identifies cost and technical barriers involving the commercial use of hydrogen fuel and provides data bases for policy-planning, decision-making and design. Based on current economic data, cryogenic hydrogen fuel appears economically marginal in auto transportation and in electrical utility systems. The fuel also appears attractive as an aircraft and aerospace fuel, a fuel to store solar energy, and for transportation of energy from proposed solar power plants at sea. "Selected Topics on Hydrogen Fuel," NBS Spec. Pub. 419, is available from the Superintendent of Documents, GPO, Washington, D.C. 20402, for $2.80. Order SD cat. No. C13.10:419.

SELF-STUDY COURSE...Dr. John Anderson, University of Pittsburgh, has developed a self-study course on energy and society for high school teachers and community leaders. Direct inquiries to Dr. Anderson, Dept. of Physics, University of Pittsburgh, Pittsburgh, Pa. 15213.

WHAT'S WHAT IN PETROLEUM...The Federal Energy Administration plans to publish a complete and comprehensive listing of information on corporate ownership in the petroleum industry. The two-volume, 850-page document, entitled The Petroleum Industry: A Report on Corporate and Industry Structure and Ownership, was prepared by FEA with assistance from R. Shriver Assocs., of Parsippany, N.J. Final publication is expected in about mid-July. The report lists some 1,500 parent petroleum companies and over 8,000 domestic and foreign subsidiaries, affiliates, and investments in refining, marketing, production, pipelines, uranium, geothermal, coal and non-energy areas. It provides the equity share owned by the parent firms and identifies the principal business for each subsidiary, affiliate and investment. For joint ventures it presents the parent's equity interest, plus a list of joint-venture partners and their investments. Order Document no. FEA/B-75/326B for $20.50 from NTIS Sales Dept., 5285 Port Royal Rd., Springfield, Va. 22161. Make checks payable to National Technical Information Service.

TURNABOUT...Usually on the issuing end of citations, the California and Wyoming Highway Patrols recently received citations of their own. FEA has honored both for their strict enforcement of the national 55-m.p.h. speed limit. The Wyoming officers issued a total of 32,178 speeding citations in the year ending March 1, compared to 6,066 the previous year. The California patrol's techniques included parking patrol vehicles in plain view alongside major roadways, using moving patrol vehicles at a steady 55 m.p.h., and special 'beat' saturation teams. In addition to giving motorists about 21 percent better mileage than at 70 m.p.h., the new limit has also cut traffic fatalities by about 20 percent nationwide.

WIND INTEREST STIRRING...The Wind Energy Society, a new scientific organization to encourage use of wind power, has been formed in California. While wind-generated electricity is not new, the Society believes modern technologies and new lightweight metals and fiber glass can make today's power windmills more economical than early systems. The organization disseminates information to scientists, industrialists, and government; it also promotes related education and research through its publications, symposiums and awards. For reports ranging from historical reviews to highly specialized papers on windmill design, write: Wind Energy Society, 1700 East Walnut, Pasadena, Calif. 91106.

KEEP POSTED...FEA is cracking down on service stations in Nebraska and Iowa that have not posted octane ratings and maximum gasoline prices as required by FEA regulations published Feb. 5. Using too-low octane can damage a car engine, while buying too-high octane wastes oil, because high-octane requires more crude oil per gallon. Station owners who do not heed the warnings can be fined up to $2,500 for each day they violate the regulation.

U.S. Manufacturers Trim Planned 1975 Investments For New Plant And Equipment

U.S. business expects to spend $114.2 billion for new plant and equipment in 1975, 1.6 percent more than in 1974, according to Commerce's Bureau of Economic Analysis. Allowing for inflation, this would amount to about a 10 percent decrease in real investment. Such outlays increased nearly 13 percent in both 1974 and 1973. The latest projection, obtained in a survey conducted in late April and May, compares with $116.1 billion, or a 3.3 percent gain, reported in March.

Actual outlays in the first quarter declined 1½ percent from the fourth quarter of 1974 to a seasonally adjusted annual rate of $114.6 billion. They are expected to decline an additional 1 percent—to $113.4 billion—in the second quarter and to remain virtually unchanged in the third. The projections indicate a rise of about 1½ percent in the fourth quarter, to an annual rate of $15.4 billion.

These data are not adjusted for price changes. As measured by the implicit price deflator for fixed nonresidential investment in the national income and product accounts, capital goods prices are still rising at a rapid rate and have increased at the rate of about 12 percent in the four quarters ending in March 1975. If businessmen expect such price increases to continue and have reflected the increases in their 1975 spending projections, then a decline in real spending of about 10 percent from 1974 is indicated, as mentioned above.

The downward revision of investment plans affects the second half of 1975, with manufacturing and nonmanufacturing reducing plans at about the same rate. Actual outlays in the first quarter were 1 percent above expectations reported in March, and second quarter expectations are little changed. The higher rate of spending in the first quarter may be due to earlier-than-expected delivery of equipment as backlogs declined.

Manufacturers plan a 5½ percent increase in capital outlays in 1975. The increase is 13 percent for nondurables producers, but a 2½ percent decline for durables. Nonmanufacturing industries plan a 1 percent decline.

Starts and carryover of projects

Manufacturers started new investment projects totaling $12.1 billion, seasonally adjusted, during the first quarter of 1975, compared with $12.9 billion in the fourth quarter of 1974. Starts for petroleum and paper rose sharply in the first quarter, but decreases were reported by primary metals and chemicals from their high levels in the fourth quarter. Most other major manufacturing industries reported lower starts in the first quarter than in the fourth.

New projects started by manufacturers about equaled their capital expenditures in the first quarter of 1975; consequently, there was little change in carryover—the amounts still to be spent on plant and equipment projects already under way. Seasonally adjusted carryover at the end of March totaled $38.5 billion.

Starts by public utilities totaled $5.3 billion in the first quarter; this compares with $6.8 billion in the preceding quarter and the record $14.6 billion in the second quarter of 1974. Carryover of utility projects was $89.7 billion at the end of March, about $300 million higher than at the end of December.

Capital Goods Spending, 1973-75

	Actual 1973	*Actual 1974*	*Expected 1975*	*Percent change 1973-74*	*Percent change 1974-75*
	(Billions of $)				
All industries	99.74	112.40	114.24	12.7	1.6
Manufacturing	38.01	46.01	48.47	21.0	5.4
Durable goods	19.25	22.62	22.08	17.5	−2.4
Nondurable goods	18.76	23.39	26.40	24.7	12.9
Nonmanufacturing	61.73	66.39	65.77	7.6	−0.9
Mining	2.74	3.18	3.82	16.2	20.1
Railroad	1.96	2.54	2.84	29.5	11.9
Air transport	2.41	2.00	1.91	−17.0	−4.6
Other transport	1.66	2.12	2.58	27.5	21.8
Public utilities	18.71	20.55	20.40	9.8	−0.7
Communications	12.85	13.96	13.36	8.6	−4.3
Commercial, other	21.40	22.05	20.87	3.0	−5.4

'. . . A Matter Of Concern'

Secretary of Commerce Rogers C. B. Morton issued the following statement on capital spending projections for 1975:

"The downward revision in business capital spending plans for 1975 reflects weakness in a major sector of the economy, but it was not unexpected in light of the sharp declines in output and corporate profits in the first quarter of this year.

"The reduction in planned spending does not alter the prospects for a recovery of overall economic activity in the second half of 1975.

"Although production is well below capacity at present, continued weakness in the rate of capital expansion is a matter of concern because of the implications for future years. We must have adequate capacity after the recovery is well under way in order to assure long-term growth and reasonably stable prices.

"Of particular concern are the continuing downward adjustments in particular industries, such as utilities, that have experienced capacity limitations over the past two or three years and are the most likely to face such shortages again in a strong economy."

Industry Highlights

In A Resourceless World, The Recycler Will Be King

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

The growing realization that we live in a world of limited raw material resources is pumping new life into the recycling and reuse of scrap metals by U.S. industries.

While helping to solve the problems of supply shortages, the reuse of scrap metals also helps relieve another major national problem—solid waste disposal—in the view of Dan R. Gill, manager of the Office of Business Research and Analysis' iron and steel program.

The key to achieving recycling success is increasing market demand for metal scrap, Gill states. Waste management officials at the state and local level have learned that quality and price at point of use are essential elements in the marketing of recovered resources. He points to long-term contracts as one way for the producers, processors and sellers of metal scrap to be assured of a demand for their product, and for the buyers (mills, refineries, and foundries) to be assured of a supply.

Supply factors

Several factors will influence future supplies of primary ferrous and nonferrous metals, and, in the process, the outlook for scrap metal.

Capital availability — The industry is facing severe problems in raising the huge sum required for new capacity investment on a reasonable long term basis. The current state of world equity markets and the effect on new debt issues is causing an increasing dependence upon internal financing. Although not unique to materials producers, this trend has created special problems for an industry that is so capital-intensive. Inflation has also taken its toll on both the cost and competitiveness of new capacity.

Metals demand and the business cycle—The extremely narrow profit margins in the metals industry and the effect of demand downturns on prices themselves severely impact upon the industry's ability to expand capacity. This feast-or-famine pattern is generally characterized in some metals areas by an inability to satisfy demand in peak periods and by stiff price competition, high-cost inventory buildups, and uneconomic production curtailments in the down times.

Exploration and development of primary raw materials—Although exploration and development continues there has been a sharp decline worldwide compared to the level of activity in the late 1960s and early 1970s. This decline, if not corrected, will undoubtedly have a limiting effect upon new metal capacity that otherwise would have been added. It also puts added emphasis on the importance of recovery and recycling of scrap metals.

Due to present economic conditions, the immediate availability of materials is not a keen concern for consuming industries that are suffering sharply reduced demand for their own products.

Growing concern

Turning to the scrap situation, Gill points to a growing national and global concern over long-range availability that appears to enhance the growing importance of secondary metals to total resource demand. This trend is probably one of the most important outgrowths of the shortages of raw materials experienced in the 1973-74 period.

He also observes that the metal scrap processing industries are continuing to improve their technology in sorting, segregating and preparing metal scrap into raw materials of value to the using industry.

There is no doubt that the long term requirements for metal scrap will increase because, no matter how large the supply of any raw material may be, it is a finite resource.

Technology changes also are making the reuse of materials, especially metals, more economically attractive. For instance: a) electric furnace steelmaking, which utilizes large quantities of ferrous scrap, is a growing part of steel production; b) continuous casting of steel requires about 15 percent more iron units per ton of steel shipped—this means less re-circulating scrap is produced and more obsolete scrap will be required to replace it; c) design technology is making it easier to reclaim secondary metals. The best example of the contribution technology is making is the total aluminum can. When the can was part aluminum and part steel it was almost impossible for either industry to use.

Possibly the most important factor in increasing the demand for recyclable metal scrap is the worldwide need for energy conservation. Only 25 percent of the energy required to produce a ton of steel from basic iron ore is required in producing a ton of steel from scrap. For aluminum, an even more energy-intensive product, the saving in energy required when using scrap is in excess of 90 percent.

Probably the four most important metals to be reclaimed from the solid waste stream are iron and steel scrap, copper scrap, lead scrap and aluminum scrap.

Ferrous scrap

1973 and 1974 were record years for the production of steel and the production and consumption of ferrous scrap. At the same time that domestic ferrous scrap demand was peaking, foreign demand was also reaching record proportions. The U.S. recycling industry was equal to the resultant demand placed upon its equipment and manpower, and produced and shipped record quantities of ferrous scrap, both to domestic consumers and abroad. Prices, however, rose to record levels.

The high ferrous scrap demand during those years decreased drastically the unsightly auto graveyards that once dotted the countryside. The success of the recycling industry in developing the "Automobile Shredder" has made auto scrap a much more valuable raw material to the steel industry and has enhanced the recovery, not only of the ferrous material in automobile hulks, but also the nonferrous material.

As steel production technology has moved in the direction of the electric furnace to produce an ever-increasing share of raw steel, there has been a corresponding worldwide increase in the demand for scrap.

Need local suppliers

The site selection and location of the so-called "mini mill" throughout the country is as dependent on a local scrap supply for its raw material as for a local market for its product.

The continuous casting technique for producing steel requires an increase in purchased scrap per ton of steel shipped in excess of 15 percent. An ever-increasing proportion of steel is being cast in this fashion which, combined with the additional demand created by the electric furnace, should strain the capability of the recycling industry in the next period of high demand.

Domestic consumption of purchased iron and steel scrap in 1973 was approximately 48 million tons; in 1974 it was approximately 45 million tons; and for 1975 it is forecast at approximately 40 million tons. Exports approximated 11 million tons in 1973, 9 million in 1974, and are expected to approach 8.5 to 9 million tons in 1975.

While it is obvious from these numbers that 1975 will not tax the scrap processing industry's capacity, demand is expected to begin increasing in 1976 and continue to grow as the worldwide demand for steel increases. There will be

ups and downs in scrap demand, but the long-term trend will show a rising demand for scrap over the next ten-year period. The scrap industry will have to tap new sources for ferrous scrap to supply this increasing demand.

Copper-bearing scrap

Approximately 40-45 percent of the U.S. copper supply in any given year is obtained from scrap. Approximately thirty percent of the copper recovered from scrap is reprocessed into pure copper, thus tying the markets for scrap and refined copper close together. The other 70 percent of the scrap supply goes into the manufacture of brass and bronze castings and semifabricated mill shapes. In most situations, the interchangeability of scrap and refined copper is a function of economics, not technological limitation.

Despite the efficiency of a highly developed copper-base scrap market, there is urgent need to expand the collection of obsolete copper-bearing scrap. This need is not only derived from environmental considerations, but relates to the limited copper refinery capacity in this country.

Lead

The importance of secondary recovery to supply and demand makes lead—perhaps more than any other metal—a paragon of recycling. In 1974, secondary lead accounted for 48 percent of total U.S. production. Recycling is especially important in the battery market, where secondary antimonial lead recovered from old batteries is the major source of material for battery grids and oxide in the manufacture of new batteries. Secondary metal also plays a major role in solder supplies.

Although the lead market held up rather well until very recently, the market is now weak. U.S. consumption remained at record levels in 1974, despite the downturn in the automotive sector and the curtailed driving activity and consequent lower fuel demand early in the year.

The future of the lead market remains cloudy, with the future of the lead-in-gasoline market, which affects about 19 percent of U.S. consumption, still undecided. Although a federal court ordered the Environmental Protection Agency to set aside its lead-in-gasoline regulations in January, the court has since agreed to rehear the case, thus re-opening the issue.

Secondary lead probably will become the dominant source of lead in the next five years, accounting for more than 50 percent of refined output, which totaled 1.3 million short tons in 1974. This trend appears confirmed by announced plans for major secondary lead expansions.

Aluminum scrap

The secondary aluminum industry, using scrap as its essential raw material, plays an important part in the total aluminum supply situation. Historically, secondary recovery has accounted for between 18 to 20 percent of the annual total U.S. aluminum supply. During 1974, domestic secondary recovery amounted to 2.5 billion pounds, or about 19 percent of the total U.S. supply of 13.3 billion pounds.

The aluminum industry is actively developing better and more economical methods for recovering and recycling waste and scrap. Municipalities, concerned with landfill space problems, pollution and the cost of waste disposal, are anxious for solid waste processing systems to help lessen these problems. The relatively high value of the aluminum recovered from such waste and scrap makes it especially attractive for solid waste processing systems. A number of processing plants for mixed municipal solid waste, including aluminum, are now under contract, under construction or in operation.

An example of industry efforts to increase recycling is the program, begun in 1967, to recycle used aluminum beverage cans. The program has been expanded to the point where there are now more than 1,300 collection centers in 38 states where consumers may turn in cans for cash. The collection of cans for recycling has mounted from 10 million in 1968 to 1.6 billion in 1973, which was about 15 percent of the total aluminum beverage can usage. The number of cans recycled in 1974 is estimated at 2 billion.

Generally speaking, modern aluminum industry technology makes it possible to recycle all aluminum that is recovered from waste or scrap into useful aluminum products. More importantly, the recovery of a ton of aluminum from waste or scrap means a saving of virtually all the raw materials, and 95 percent of the energy required to produce an equivalent ton of new (primary) aluminum.

In short, businessmen can now join environmentalists in cheering what may be the end of the "throw away" era.

Minorities Move Into Cable TV

Minority entrepreneurs are moving into the American cable television market with force—both as investors and as managers of minority-owned and controlled companies.

Eleven local governments granted franchises to minority-owned and controlled cable television corporations in 1974, nearly doubling, to 25, the number of minority cable corporations.

With these new franchises, minority cable TV corporations are now authorized to serve some 290,000 homes across the nation—housing about one million people.

These locally granted franchises represent a significant minority business investment. Unlike broadcast television, the cable system requires picture transmission by coaxial cable across streets, residential areas and other public places. The capital investment requirements are substantial.

The new franchises awarded in 1974 were assisted by an intensive organizational campaign by the Washington-based Cablecommunications Resource Center (CRC), a national information clearinghouse for minorities in the field of cable television.

The center was established by the Booker T. Washington Foundation under contract from the U.S. Department of Commerce's Office of Minority Business Enterprise (OMBE).

Since 1973, the non-profit clearinghouse has researched 75 cable television markets, helped five minority-owned systems into operation, and formed more than 100 venture groups and corporations to seek cable franchises. OMBE has worked closely with CRC to develop local government and financiers' interest in minority ownership of cable systems.

CRC professionals have worked with minority groups in 35 of the 70 U.S. cities with large black or Spanish-speaking populations. Their service includes market analysis, corporate development, construction and franchise application packaging.

Biggest in state

For example, CRC helped the successful Gary (Indiana) Communications Group through all phases of its formation, franchising application, financing, and operating efforts. Gary's Dr. Bill Douglas reports that after starting with $30,000 in 1973, the company now has assets of $800,000. In dollar terms, the Gary group is the most substantial minority-owned enterprise in Indiana.

Armendaris, citing the Gary experience as an example, says that the CRC-OMBE efforts to promote cable television ownership by minorities is more than an economic enterprise. "Black and other minorities view television as the most credible source of information," Armendaris says. "Yet, minorities have almost no voice in program content. In Gary, a group of 20 working-class blacks raised $150,000 from their personal savings and from small personal loans to support minority cable television. This is real grass roots participation."

Minority participation in cable television offers a healthy alternative to current television broadcast industry trends toward majority ownership. Of 700 VHF television stations in the United States, only one station is owned by a black. Native Americans, and Spanish-speaking entrepreneurs own none.

"This is a situation which needs correcting," says OMBE Director Armendaris. "We feel the job can be done."

Public and Private Debt 1967-74

(billions of dollars)

	1967	1968	1969	1970	1971	1972	1973	1974
Net debt								
Total	1,438.1	1,581.3	1,736.0	1,868.5	2,045.4	2,283.1	2,546.2	2,777.3
Public debt	408.1	436.0	453.2	484.7	528.6	559.5	598.4	642.9
Fed. Government	286.4	291.9	289.3	301.1	325.9	341.2	349.1	360.8
Fed. financial agencies	9.0	21.5	30.6	38.8	39.9	41.4	59.8	76.4
State, local govts.	112.8	122.7	133.3	144.8	162.8	176.9	189.5	205.6
Private debt	1,030.0	1,145.3	1,282.8	1,383.8	1,516.8	1,723.6	1,947.8	2,134.4
Corporations	553.6	631.5	734.2	797.6	869.2	989.4	1,125.9	1,254.2
Individuals and uninc. enterprises	476.3	513.8	548.6	586.2	647.6	734.3	821.9	880.1
Residential mort. (1-4 family nonfarm)	232.0	246.5	261.5	278.9	304.6	340.6	377.2	403.3
Consumer	100.8	110.8	121.1	127.2	138.4	157.6	180.5	190.1
Business and farm	143.5	156.5	165.9	180.1	204.6	236.1	264.2	286.7
Gross debt								
Total	1,628.3	1,791.3	1,980.4	2,133.9	2,333.7	2,606.5	2,909.9	3,177.7
Public debt	488.1	519.9	549.7	588.8	641.3	682.9	734.0	789.7
Fed. Government	361.9	371.3	381.2	400.8	434.4	460.2	480.7	504.0
Fed. financial agencies	9.0	21.5	30.6	38.8	39.9	41.4	59.8	76.4
State, local govts.	117.3	127.2	137.9	149.2	167.0	181.2	193.5	209.3
Private debt	1,140.2	1,271.4	1,430.7	1,545.1	1,692.4	1,923.6	2,175.9	2,387.9
Corporations	663.9	757.6	882.1	958.9	1,044.8	1,189.4	1,354.0	1,507.8
Individuals and uninc. enterprises	476.3	513.8	548.6	586.2	647.6	734.3	821.9	880.1

Private Sector Credited With Debt Growth Slowdown During 1974

Net public and private debt in the United States reached $2,777.3 at the end of 1974, 9.1 percent higher than the total at yearend 1973. U.S. debt had increased by 11.5 percent in 1973, according to Commerce's Bureau of Economic Analysis, which also reported that the improved rate for 1974 was due entirely to a slowdown in private debt growth.

Public debt

Net debt of Federal Government, federal financial agencies, and state and local governments stood at $642.9 billion at yearend 1974, compared with $598.4 billion a year earlier. The rate of increase was 7.4 percent in 1974, compared with 7.0 in 1973. Debt increased fastest for federal financial agencies (as distinguished from Federal Government debt, see table above), followed by state and local governments.

U.S. Debt Distribution

Yearend 1974	**100.0%**
Public	**23.1%**
Fed. Government	13.0%
Fed. financial agencies	2.7%
State and local govts.	7.4%
Private	**76.9%**
Corporations	45.2%
Individuals and unincorporated enterprises	31.7%
Residential non-farm mortgage (1-4 family)	(14.5%)
Consumer debt	(6.9%)
Business and farm debt	(10.3%)

Private debt

Net private debt was $2,134.4 billion at the end of 1974, compared with $1,947.8 billion a year earlier. Corporate debt amounted to $1,254.2 billion, while debt of individuals and noncorporate enterprises amounted to $880.1 billion. The latter category was composed of $403.3 billion of mortgages on one-to-four family dwellings, $190.1 billion of consumer debt, and $286.7 billion of noncorporate business and farm debt. The rate of increase in private debt was 9.6 percent in 1974, compared with 13.0 percent in 1973.

Meetings Study Formation Of Radiation Gauging Unit

The need for systematic measurement of radiation levels in this country has led to plans to form a National Conference on Radiation Measurements.

The new unit will provide a forum for the exchange of views on the present status and future needs of systems used to measure radiation such as x-rays and radiation from radioactive materials. NBS anticipates that it will study existing radiation measurement systems, sponsor technical meetings and in general encourage the development of reliable measurement systems.

A June 11 meeting at the National Bureau of Standards headquarters in Gaithersburg, Md., heard representatives of state and federal regulatory agencies, medical societies, standards writing groups, industrial and public interest organizations present their views. Actual formation of the NCRM is expected at an August 27 meeting at NBS.

Interested parties can file written statements, and, to the extent that time permits, participate in the discussions. Those planning to attend the August meeting should notify James M. Wyckoff, Radiation Safety Coordinator, Building 221, Room B360, National Bureau of Standards, Washington, D.C. 20234, (301-921-2020).

Pittsburgh Productivity Seminar Slated June 26

Pittsburgh-area firms can learn the latest techniques for productivity measurement at a June 26 seminar sponsored by Commerce's District Office.

Dr. Irving Siegel of Commerce's Bureau of Domestic Commerce will cover proven techniques for starting a system of productivity measurement. Then James Wearn, Director of Corporate Production Resources Control for Westinghouse Electric, and Marvin E. Gantz, Vice President for Operations of ALCOA's Mill Product Division, will discuss their companies' programs.

The seminar will be held from 9:30-12:30 in room 2214 of the Federal Bldg.

Top Cities In Terms Of Hispanic Business Ownership

Standard metropolitan statistical area	SMSA Firms (number)	SMSA Receipts ($1,000)	Percent SMSA to State Firms	Percent SMSA to State Receipts
Los Angeles-Long Beach	12,084	531,779	43	41
Miami	4,847	363,228	72	81
San Antonio	4,616	189,831	20	19
New York	3,976	220,192	86	91
San Francisco-Oakland	3,389	183,760	12	14
Houston	2,999	110,641	13	11
El Paso	2,195	131,202	9	13
McAllen-Pharr-Edinburg, Tex.	1,900	70,509	8	7
San Jose	1,792	83,888	6	6
Dallas-Fort Worth	1,695	81,399	7	8

Hispanic-Owned Businesses In U.S. Gain In Numbers, Gross Receipts

More than 120,000 U.S. businesses were owned by persons of Spanish origin in 1972, according to Commerce's Bureau of the Census. The total was 20 percent greater than the total found in a similar 1969 survey. Gross receipts for these firms jumped 58 percent during the same period, to an estimated total of $5.3 billion.

Of the total Hispanic-owned firms counted in 1972 about one-third, or 28,166, were in California, and they had gross receipts of $1.3 billion. Other leading states, with their total number of firms and gross receipts were: Texas, 23,651, $1 billion; Florida, 6,726, $448 million; New York, 4,619, $243 million; and New Mexico, 4,027, $171 million.

The Spanish origin report is the third in a series on minority-owned businesses from the 1972 Economic Censuses, released by the Bureau, which is a part of Commerce's Social and Economic Statistics Administration. Two earlier reports covered black-owned businesses and businesses owned by Asian-Americans, American Indians and other racial minority groups.

Among the Standard Metropolitan Statistical Areas in 1972, the Los Angeles-Long Beach SMSA had the largest number of Spanish origin-owned firms (12,084) and the largest revenue received from these operations ($531.8 million). Next in order were Miami, San Antonio, New York, San Francisco-Oakland, Houston and El Paso (see table).

Highly concentrated

The report shows that in 1972 Spanish origin-owned firms were highly concentrated in retail trade and selected services, as they were in 1969. Retail and selected service firms accounted for 61 percent of all firms owned by persons of Spanish origin and 58 percent of their gross receipts. There were 42,193 firms in retail trade with gross receipts of $2.4 billion and 31,647 firms in selected services with gross receipts of $658 million.

However, from 1969 to 1972, the greatest percentage increases in receipts were in manufacturing (126 percent) and construction (125 percent). The biggest increases in numbers of firms and receipts were in retail trade and construction. Retail trade firms increased by 8,932 and construction firms increased by 6,656, while their receipts increased by $731 million and $375 million, respectively.

The report also includes detailed data on industries by type, number of paid employees distributed geographically by industry, and legal form of organization.

Single copies of the report, "Minority-Owned Businesses—Spanish" MB-72-2, may be purchased for $3.95 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or from Commerce's District Offices.

Air Transport Of Radioactive Matter Studied

The Nuclear Regulatory Commission (NRC) is initiating a public rulemaking proceeding concerning the air transport of radioactive materials, including plutonium and enriched uranium. The proceeding will deal with the health and safety aspects—including packaging—and the measures taken to protect these materials from theft or diversion.

The Department of Transportation and the Federal Aviation Administration, which also have jurisdiction over packaging and air transport of radioactive materials, are expected to contribute to the rulemaking proceeding.

There have been no accidents involving civilian aircraft carrying plutonium and no transportation accidents of any kind involving the release of plutonium in the commercial nuclear industry. However, concern has been expressed by some public officials and others as to the safety and security of shipments of these materials through highly populated areas, and there have been requests that air shipments be limited or curtailed.

In view of the safety and safeguards requirements of the NRC, the high integrity of packaging required by all three agencies, and the very low probability of serious accidents, the Commission decided not to suspend air shipment of plutonium or enriched uranium during the conduct of the rulemaking procedure. However, comments are invited on this particular matter and should be submitted within 30 days of its June publication in the Federal Register.

In connection with rulemaking, the NRC staff will prepare a generic environmental impact statement on air transport of radioactive materials—including packaging and related ground transportation. Land and water transport also will be considered as part of a requirement of the National Environmental Policy Act that the relative costs and benefits of alternatives to proposed major federal actions be fully considered.

Seeks views

As part of the rulemaking proceeding, the NRC is seeking the views of interested persons and organizations; particularly regarding:

- Whether radioactive materials should continue to be transported by air;
- Assuming a justifiable need for air transportation, the extent to which safety requirements should be based on: (a) accident probabilities, (b) packaging, (c) procedural controls, or (d) combinations of the above;
- The relative risk of the transport of radioactive materials by air compared to other modes of transportation, and to other hazards faced by the public which may or may not be the subject of regulation, and
- Are improvements necessary in air transportation of radioactive materials and, if so, what are they?

Comments on the draft environmental statement, with supporting documentation, should be sent to: The Secretary, Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Section. They should be received by August 1. NRC will issue a public notice when the draft environmental impact statement is completed, and provide an opportunity for public comment.

State, Local Governments Lead In U.S. Public Employee Growth

There were close to 14.7 million civilian employees in October 1974, an increase of 529,000 or (3.2 percent) over the same month in 1973, according to Commerce's Bureau of the Census. The increase is accounted for almost entirely by state and local governments, where employment totals rose from 11.4 to 11.8 million (3.9 percent), while the number of federal civilian employees increased only slightly to 2.9 million.

Public civilian payrolls for the month of October 1974 totaled $12.1 billion, $1.1 billion more than for October 1973. Of the 1974 payrolls, totals for state and local governments were $8.8 billion and for the federal government $3.3 billion.

The full-time equivalent of all state and local government employment was 9.9 million. Local governments accounted for 73 percent of this number. Full-time equivalent is calculated by dividing the average monthly pay of full-time employees into the total pay for all full- and part-time employees.

State, local gains

The report says that during the 22-year period from October 1952 the full-time equivalent number of state and local government employees rose 146 percent, and payrolls went up 686 percent.

Civilian federal employment reached a peak of about 3.4 million during World War II, was cut back to 2 million in 1947, and rose again to 2.5 million in 1951. Then, after several years of only minor change, moved up to nearly three million in 1967, and has since maintained its present level of about 2.9 million.

The number of federal civilian employees working in various states in 1974 ranged from a high of 299,000 in California to fewer than 10,000 in Delaware, Idaho, Nevada, New Hampshire, North Dakota, Vermont, and Wyoming.

Total state and local government employment dropped somewhat during World War II from 3.4 million to 3.2 million and has shown a significant increase nearly every year since.

Education dominates

Nearly half (4.9 million) of the 1974 full-time equivalent employment of state and local governments was in the field of education. Approximately 64 percent of all public school employment consisted of instructional staff—teachers, teachers' aides, principals, supervisors of instruction, school librarians, and guidance personnel.

Full-time employees of state and local governments were paid an average of $899 for the month of October 1974—$52 a month more than October 1973, the report also shows.

State, Local Employees

Function	*Full-time equivalent*	
	Number	*%*
Total	**9,881,000**	**100.0**
Education	4,930,000	49.9
Local schools	3,839,000	38.9
Higher educ.	1,005,000	10.2
Other educ.	87,000	0.9
Hospitals	935,000	9.5
Highways	561,000	5.7
Police protection	532,000	5.4
General control	317,000	3.2
Public welfare	316,000	3.2
Financial admin.	242,000	2.4
Fire protection	211,000	2.1
Correction	185,000	1.9
Non-water utilities*	181,000	1.8
Health	179,000	1.8
Natural resources	169,000	1.7
Local parks, rec.	136,000	1.4
Sanitation, other than sewerage	124,000	1.3
Water supply	118,000	1.2
Employment security	85,000	0.9
Sewerage	78,000	0.8
All other	582,000	5.9

* Electric power, transit, and gas supply systems.

Calendar For Businessmen

June 23-24—Kansas City, Mo. — Consumer Energy Workshop sponsored by FEA's Office of Consumer Affairs and Special Impact. 9:30 a.m. New Federal Bldg. Contact: Pat Hand, 816-374-2941.

June 29-July 1—Carmel, Calif. — The Future For Printing Technology, Highlands Inn. For information, Institute for Graphic Communication, 375 Commonwealth Ave., Boston, Mass. 02115 (617-267-9425).

July 10-11—San Francisco — Remedies for Breach of Contract seminar, St. Francis Hotel. For details, Practising Law Institute (212-765-5700).

July 23-24—San Francisco — Consumer Energy Workshop sponsored by FEA's Office of Consumer Affairs and Special Impact. Contact: Gerry Jackson, 202-964-4781.

Aug. 28-29—Chicago—Consumer Energy Workshop sponsored by FEA's Office of Consumer Affairs and Special Impact. Contact: Gerry Jackson, 202-964-4781.

Industries Pace Lake Erie Revival

The picture of a "dead" Lake Erie is no longer accurate, according to Sea Grant scientists at the State University of New York.

The New York-Pennsylvania Sea Grant Advisory Service, located in Fredonia, N.Y., is letting the general public know that the lake is in better condition now for recreational uses such as fishing, boating, and swimming than it has been in many years.

The apparent change in the condition of the lake has been primarily a result of the widespread use of more efficient pollution control devices in industry, according to Sea Grant ecologists. In addition, stricter standards for effluent discharges and the construction of new sewage treatment plants along the lake have helped improve water quality.

The Fredonia Marine Advisory Service is one of the more than 30 National Oceanic and Atmospheric Administration advisory service offices throughout coastal and Great Lakes states. Working through Sea Grant institutions supported by the Commerce Department agency and with the cooperation of state and local agencies, these offices directly assist the public, marine industries, and coastal zone managers in dealing with the marine environment and its resources. A 1973 study commissioned by the Erie County (Pennsylvania) Health Department concluded that "in general, the water in the Pennsylvania region of Lake Erie is good to excellent when compared to the most stringent criteria for recommended uses established by the Pennsylvania Environmental Quality Board and the U.S. Environmental Protection Agency."

More recently, information on sports and commercial fish landings is beginning to reflect the lake's new vitality. Sportfishermen have reported increased catches of yellow perch, walleye pike, and salmon, and commercial landings are rising sharply. In New York alone, Lake Erie landings for 1974 totaled more than 333,000 pounds of food fish, that state's largest annual catch since 1962.

"The lake still isn't the way it was in the 'good old days'—before 1950," says Rob Patten, a regional marine specialist with the Advisory Service. "But we have made substantial progress."

Mission Sees U.S. Business Benefit From South America Petrochemical Industry Plans

Plans calling for expenditures of more than $7 billion in the petrochemical industries in several Latin American countries and opening opportunities for many U.S. suppliers were explored recently by a U.S. trade mission.

The plans, for developments over the next four years in Argentina, Brazil, and Venezuela, signal an extensive potential market for instrumentation, production equipment, components, and engineering services. Details of the various projects were outlined to members of the mission by national industry officials.

Members of the mission report that financing was a recurrent theme at every stop. U.S. suppliers face tough competition from German, French, Japanese, Italian and Eastern European suppliers. Companies are eager for capital for their projects and stressed that a liberalization of U.S. export financing is necessary if U.S. firms are to take part in equipment sales. In each country, especially in Brazil, strong interest was expressed in arrangements for local manufacture.

The six-member chemical and petrochemical equipment mission was organized by the U.S. Department of Commerce and led by Arthur F. Sampson, Administrator of the General Services Administration.

Expansion in Venezuela

In Caracas, the Venezuelan Association of Manufacturers of Chemical Products outlined plans for a major expansion of the petrochemical industry, with annual expenditures of about $1.2 billion during the next four years for installation of basic facilities and downstream plants. The country also will play an important role in the Andean subregion $1.65 billion petrochemical program. Members met with the Instituto Venezolano de Petroquimica (IVP) which administers and controls the country's petrochemical production; with the executive secretary and board director of the National Council on Petrochemicals, charged with reassessing the state role in development of the sector; and with a private group, Penta Complejo Petroquimica de Oriente, C.A. (PENTACOM). PENTACOM is interested in maintaining private control over the country's hydrocarbon resources. Although some state ownership would be required, PENTACOM also wants foreign private partners that would supply technology and marketing know-how.

Two major areas are designated for expansion by IVP. The organization intends to spend $817 million, spread over 1976-80, on the second stage of development in El Tablazo on the east bank of Lake Maracaibo. At Moron, a 350-ton-per-day urea plant is planned, plus facilities for manufacture of a range of fertilizers. A number of downstream enterprises are contemplated for El Tablazo—including polyethylene, vinyl acetate, isopropynol, acrylonitrile, polypropylene, vinyl chloride monomer, and polyvinyl chloride—for which majority ownership will remain in Venezuelan hands through IVP or through IVP in combination with private Venezuelan companies.

In Salvador da Bahia, Brazil, mission members visited the site of the country's second major petrochemical complex and had a chance to appreciate at first hand the magnitude of the Camacari project. The core project, controlled by a Petrobras (the Brazilian petroleum monopoly) subsidiary, COPENE, will produce basic petrochemical products such as ethylene, propylene, butadiene, benzene, toluene and xylenes for tertiary petrochemical plants. In the tertiary field there are now six plants in production, seven under construction and nine in engineering stages. The complex, when completed in 1980, will include more than $2 billion in public and private investment. Most major units are to be fully operational by 1977. The presentation at COPENE detailed the technical aspects of the various projects, which enabled members to develop additional leads for later contact.

Although Camacari is an impressive reality, and members found the visit extremely useful, they discovered that for most of the companies the major decisions were made at headquarters, either in Rio or Sao Paulo. However, once all the plants are in operation at Camacari, and replacement and modernization equipment become necessary, the sales potential in Salvador itself will be significant.

Potential in Sao Paulo

In Sao Paulo, center of Brazil's first petrochemical complex, members visited the facilities at Petroquimica Uniao, S.A. at Capuava. The unit cracks naphtha to make ethylene, propylene, benzene, toluene, xylenes and aromatic oils—all starting materials for downstream products in the petrochemical field. About 165,000 metric tons of ethylene are currently produced. Industry officials outlined plans for doubling capacity at plants in Capuava and Cubatao, which must compete with proponents for expansion in the Aratu area of Bahia. Government approval is anticipated momentarily; after the green light, timing depends on how quickly the equipment can be obtained. Equipment source depends on financing, which is extremely competitive.

Members' enthusiasm for the potential in the petrochemical industry in Sao

MISSION MEMBER IN BRAZIL—*Daniel Smerald (left), of Amerace Corp., points out details about his company's components to a Sao Paulo businessman.*

Paulo is expressed in excerpts from their reports: "Brazil represents a major business opportunity for domestic manufacture. To participate we must assemble and manufacture components here." . . . "In addition to appointing an agent, we may consider long-range manufacture." . . . "Sao Paulo represents an outstanding market potential for most of our equipment . . . We easily sold our ultrasonic test equipment." . . . "The trip convinced me of the necessity for strong technical and sales support for the on-going effort of our joint-venture partner in Sao Paulo."

New plants for Argentina

In Argentina, current investment in the petrochemical industry is estimated at $380 million. The 1973 production value reached $270 million and met 80 percent of local demand; however, production has not kept up with demand. Therefore, the government has an ambitious plan to invest $600 million in the petrochemical sector by 1977. Most of the major upcoming opportunities in the field will involve construction of complete new plants. The market is basically comprised of government enterprises: YPF, the petroleum monopoly; Fabricaciones Militares; joint ventures in which YPF is a partner; and a few private Argentine capital firms.

Mario Pombo of the Argentine Chemicals Association outlined 16 projects in which the government intends to invest or in which it intends to promote private investment. About one-fourth of the total investment will be for imported equipment. Because of the importance of financing in such large projects, the source of the equipment will be largely determined by the financial package being offered. Mission members comments include these: "Most of the future for our product is in the nuclear field." . . . "Argentina has all the basic requirements of scientific, industrial and labor resources to be a major industrial country."

Mission members and the companies they represented, were: Dexter V. Dunlap, Process Instruments Div., Thermo Electron Corp., Waltham, Mass.; Samuel A. Gardner, Davy Powergas, Lakeland, Fla.; Robert E. Honer, H.T.L. Industries, Pasadena, Calif.; Richard S. Peugeot, Ridge Instrument Co., Tucker, Ga.; Daniel C. Smerald, Control Products Div., Amerace Corp., Union, N.J.; and Wilbur O. Teeters, Hoke Intercontinental Ltd., Cresskill, N.J.

Multilateral Trade Negotiations

This article is another in a series of reports on preparations for and notable developments in the multilateral trade negotiations, as prepared by the Commerce Department's Office of International Trade Policy.

GENEVA: The **MTN Tariffs Group,** at its second round of discussions, in mid-May, saw a number of participants, including the U.S., Canada, the European Community, Japan and Switzerland, tabling possible tariff reduction formulas without making any commitments. The U.S. delegation is not in a position to consider adoption of any specific tariff formula approach, it was pointed out, until completion of the consultations with the U.S. private sector that are now under way. It submitted three possible formulas for study only. Next meeting: July 7-8.

The **Agriculture Group's Subgroup on Grains** has reached tentative approval of a work program with three interrelated categories: on achieving market and price stabilization; on expanding and liberalizing trade, and on assistance to the developing countries both on exports and imports.

The **Nontariff Measures Subgroup on Subsidies and Countervailing Duties,** meeting June 3-5, considered both issues and agreed to discuss proposals, including draft texts, for possible solutions at its next meeting in the fall. Subsidies are the primary issue from the U.S. viewpoint, with an expansion in their use noted in recent years and a consequent growing effect on competitive sales of non-subsidized U.S. products.

Many other countries, however, are more interested in discussing countervailing duties, which are used to offset the distorting effect of subsidies on exports. The U.S. is being asked to accept the principle that countervailing duties not be assessed on imports unless injury to domestic industry can be proved.

Such an injury requirement is provided in GATT Article VI, but has not been implemented by the U.S. because our countervailing duty legislation predates the GATT. U.S. negotiators have said, however, they would be willing to ask Congress to make any necessary modifications in U.S. legislation if a satisfactory solution can be reached limiting the use of subsidies, reasoning that an effective solution on subsidies will reduce the need to implement countervailing duties since countervailing duties are merely a response to subsidies.

In view of these differences in the importance attached by various countries to the subsidy and countervailing issues and in view of the emphasis placed on countervailing in previous GATT meetings, the willingness shown in the subgroup to discuss and work on both issues is considered important.

In this meeting, the U.S. suggested a possible framework for a solution dealing with both subsidies and countervailing duties. Subsidy practices, whether export or domestic subsidies, could be divided into three categories: 1) a permitted category containing a closely defined group of practices such as export information services or certain aids to developing countries; 2) a prohibited category containing the most flagrant practices that distort international trade, such as direct export subsidies; and 3) a conditional category containing practices not falling into the other categories. The U.S. suggested that practices in the permitted category should not be countervailable, that prohibited practices be countervailable, and that measures in the conditional category be countervailed against only under specified conditions.

Other delegations were not prepared to discuss the specifics of the U.S. suggestion at this time, although doubts were expressed about the concept of countervailing without injury in the prohibited category. The U.S. also suggested that more effective remedies must be developed to deal with the problem of subsidized competition in third markets and received support from several delegations.

Raised throughout the meeting was the question of differentiated treatment for developing countries. Many developing countries sought agreement that the use of subsidies by developing countries would not be restricted and that their products should not be subject to countervailing duties by developed countries. Most developed countries, while not rejecting the concept of differentiated treatment, maintained that the form of any such treatment cannot be decided before the shape of overall solutions on subsidies and countervailing duties can be seen. The issue is undecided and, for the moment, work on differentiated treatment will proceed in parallel with the overall effort.

At its first meeting May 21-26, the **Nontariff Measures Subgroup on Customs Matters** generally supported a U.S. proposal to abolish consular formalities and fees within the GATT framework, and urged cooperation and support for ongoing work in the Customs Cooperation Council (CCC) and the Economic Commission for Europe (ECE) on the issues of customs valuation, customs nomenclature, import documentation and customs procedures.

On the issue of **customs valuation,** which concerns the calculation of merchandise value for the purpose of duty assessment, discussion focused primarily on the Brussels Definition of Value (BDV), a system currently used by some 90 countries.

The U.S. criticized certain aspects of

the BDV including the "notional" concept of value, arbitrary uplift practices, the lack of publication of administrative procedures and the absence of provisions for judicial appeal. In addition, the U.S. stressed that any changes in U.S. valuation practices would require reciprocity by other countries in the MTN.

A number of other countries adhering to the BDV took note of the criticisms leveled against the Brussels system and indicated their willingness to consider changes to it. Many delegations also predicted their countries' acceptance of the CCC draft recommendation approved in March, 1974, to allow accession to the BDV by non-member countries, such as the U.S., on a free-on-board (FOB) basis.

In concluding the discussion on valuation the subgroup agreed that the delegations should submit to the GATT Secretariat, by Sept. 15, detailed comments on the main elements they feel should be included in any new international rules on customs valuation.

On the **customs nomenclature** issue, which concerns the classification of goods for the purpose of duty assessment, the U.S. urged the participants to support work in the CCC's Harmonized System Committee to revise and update the Brussels Tariff Nomenclature (BTN) currently used by 132 countries. The subgroup generally agreed that work in the CCC on a Harmonized Commodity Code provided a significant opportunity for the development of a modernized international nomenclature, and BTN member countries indicated their willingness to examine amendments to the BTN.

On the issue of **import documentation** requirements for customs purposes, the discussion focused on information requirements. The U.S. supported the simplification and harmonization of import documentation, but stated that this cannot be accomplished through technical changes alone since some documentation requirements relate to areas such as valuation and countervailing duties where structural reform is also necessary.

The subgroup generally agreed that information requirements be limited as much as possible and that technical work should proceed in the CCC and the ECE. Delegations were also asked to submit lists of what they regarded as excessive information requirements maintained by various countries to the GATT Secretariat by Sept. 15.

In a discussion on the use of **consular formalities and fees** by a number of countries, most subgroup participants strongly supported a draft interpretive note to the GATT which would require the elimination of such formalities. The U.S. believes that negotiating credit in the MTN could be given to those countries—mainly less developed countries—eliminating consular formalities and fees. The subgroup invited such countries to submit detailed explanations justifying their use, as well as a description of any problems associated with their abolition.

Yes To Market

To the question "Do you think the United Kingdom should stay in the European Community (the Common Market)?" 67.2 percent of the British voters this month said yes. Out of a total electorate of 40 million, 63.2 percent cast ballots. All 68 voting areas throughout Britain, including Wales, Northern Ireland and Scotland, voted in favor, with the exception of Scotland's Shetland Islands and Western Isles. The referendum, Britain's first, capped more than 14 years of negotiations.

On the issue of **customs procedures,** concern was expressed with certain practices, particularly those of the United States, alleging unreasonable delays in formal customs clearance, and excessive penalties for errors in customs documentation. In response, the U.S. suggested that countries might wish to take up any specific complaints bilaterally with the U.S. Bureau of Customs.

The **Nontariff Measures Subgroup on Technical Barriers to Trade** launched its work program May 6-15, and discussed nontariff barrier aspects of product standards, including differing national packaging and labeling requirements and the various marks of origin laws applied by many countries.

The subgroup agreed to use a draft standards code developed from 1971 to 1973 by a working group of the former GATT Committee on Trade in Industrial Products (CTIP) as a basis for future negotiations. This code aims to develop a mechanism by which nations can consult through formal channels to alleviate trade distortions caused by standards and certification schemes. It would provide for appropriate international consultations as countries develop standards, and urges that certification schemes and test methods be applied in a non-discriminatory manner. The underlying philosophy of the code is that standards should not be applied with a view to creating unjustifiable obstacles to international trade.

The subgroup agreed with a U.S. proposal that the code would be open for all countries of the world to sign regardless of their GATT affiliation or MTN participation. There was also general support at this meeting for the U.S. position that work on the code should proceed as rapidly as possible.

In an effort to relate its work to that of other international groups working on product standards, the subgroup directed the GATT Secretariat to compare a set of definitions adopted by the Economic Commission for Europe (ECE) to those contained in the draft code. In addition, the Secretariat is to prepare a paper on the work being done by the International Organization for Standardization (ISO) to establish a standards information network. Since some form of information system is envisioned as part of the code, it will be useful to know what work is being done by other organizations in this area.

The **MTN Tropical Products Group** was scheduled to meet beginning June 16 under guidelines for the organization of tropical products negotiations adopted by the group at its March meeting. The meeting focused on a review of the status of requests for concessions which a number of the participating developing nations have submitted to the developed countries.

WASHINGTON: Executive Branch public hearings on the MTN and a Generalized System of Preferences, which began in Washington June 3, continued with sessions in Hartford, Rochester, Chicago, Wichita, Dallas, New Orleans and Atlanta. They continue in Minneapolis, June 23-24; Portland, Ore., June 25-26; San Francisco, June 27, 30; Phoenix, July 1, and Philadelphia, July 8. They resume in Washington about July 14 and will continue until all are heard. Requests to present testimony should be sent promptly to Secretary, Trade Policy Staff Committee, Office of the Special Representative for Trade Negotiations, 1800 G St., NW., Washington, D.C. 20506; phone 202-395-3395.

About half of the 26 **Industry Sector Advisory Committees** have requested a third series of meetings, to be held this month and early in July, before giving final approval to their advisory reports.

In the **Agriculture Advisory Program,** the 150 members of the Agriculture Technical Advisory Committees were to begin three weeks of meetings, June 19 to review draft reports on U.S. negotiating objectives at the commodity level. The Agriculture Policy Advisory Committee will meet July 10 to review its draft report.

A combined meeting of the **Labor Policy Advisory Committee** and the **Labor Sector Advisory Committees** was due to be held on June 18, with the latter committees due to meet further on June 18-19, to discuss their work plan. National leaders and presidents from 52 AFL-CIO affiliates and the major independent unions compose the policy advisory committee. Unions represented on the policy committee are also represented on at least one of six sector committees.

Questions relating to the labor advisory committees should be sent to Herbert N. Blackman, Associate Deputy Under Secretary for Trade and Adjustment Policy, U.S. Department of Labor, Washington, D.C. 20210.

LOOKING AND TRYING—*Attendees at the Tokyo U.S. Trade Center's hotel and restaurant equipment exhibition examine the Henny Penny Corporation's products.*

U.S. Hotel, Restaurant Equipment Gains Favor At Tokyo Exhibition

Responding to the growing demand in Japan for sophisticated hotel and restaurant equipment, 29 U.S. manufacturers—ten of them new to the Japanese market—recently displayed some of the newest and most modern items at the U.S. Trade Center in Tokyo. This first such exhibition served to enhance an awareness among the Japanese that the United States is a leader in the manufacture of such equipment.

A broad range of food preparation and service equipment was featured, including cookers, coffee makers and serving carts; refrigerators and cases; appliances; cleaning, maintenance and sanitation equipment such as waste disposal units, dish washers and dryers; carpet and floor cleaners, and hotel furniture and accessories. Greatest visitor interest was expressed in U.S.-made trash compactors, high-speed dishwashers, large-capacity coffee makers, commercial carpet cleaning equipment, special-purpose carts for table service of salads, desserts and hot meat and vegetable dishes, portable folding furniture, stages and floors, and a variety of equipment used in fast-food and quick-service establishments.

The Japanese market for hotel and restaurant equipment is undergoing an average annual growth rate of 30 percent and is estimated at nearly $4 billion with imports in 1973 totaling approximately $56 million.

As reported in the April 14 issue of *Commerce Today*, page 24, resulting floor sales and projected sales during the next 12 months are estimated at $3.5 million—$2.1 million by the new-to-market firms.

U.S. Sales Top Competitors' At USSR Pump, Valve Show

Of the 17 nations participating in NASOSY 75, the Soviet exhibition for pumps, valves, and compressors, the United States had the largest national pavilion and reportedly had the best sales results. The 26 participating firms wrote contracts worth $700,000 and projected their first-year sales at $24.8 million.

The U.S. exhibitors received personal tours by the Soviet Minister and Deputy Minister of Chemical and Petroleum Machine Building, the Deputy Chairman of the State Committee for Science and Technology, representatives from several foreign trade organizations, a high-level delegation from Poland, and the Moscow representative of the Romanian Ministry of Foreign Trade.

Paper Mill Heads Eye U.S. Systems At Paris Display

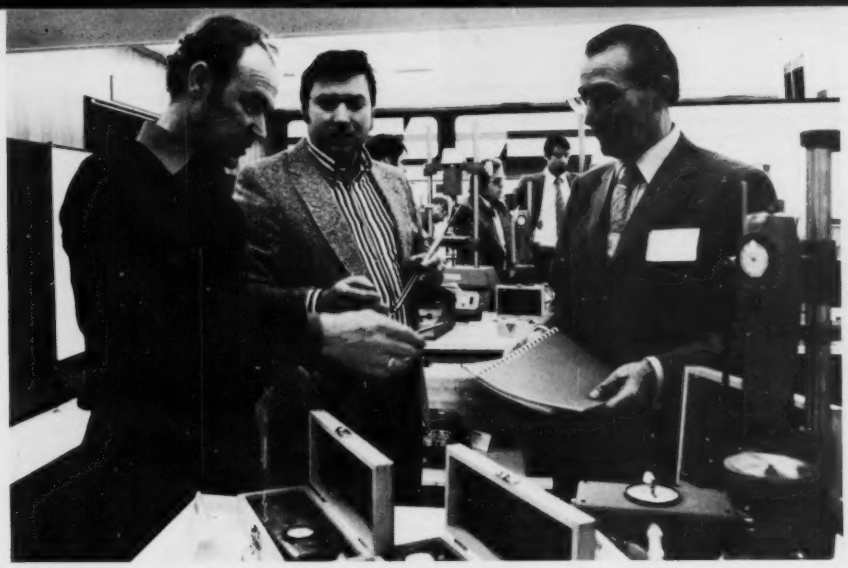
Representatives from France's largest and most important paper mills came from their widely scattered plants into Paris recently for an equipment exhibition at the U.S. Trade Center, despite a currently uncertain market in this sector.

Many mills sent delegations of plant directors, production chiefs, and engineers to view the exhibits of 33 American manufacturers of equipment for the pulp and papermaking industries. These firms' products run the gamut from wood cutting and handling equipment through paper mill process-control instrumentation to plant pollution control equipment. Products which attracted buyer interest were specialized computer-controlled process control systems, pollution control systems designed to recover chemical wastes, and compactors for baling and recycling wastes.

The U.S. trade journal, *Pulp & Paper International*, which has a large European circulation, cooperated in promoting this event and maintained a booth.

The paper industry in France has been characterized by peaks and valleys in recent years due to shortages of raw materials, inflation, and over-production, bringing about high inventories. Trade sources report that while 60 percent of equipment purchased by French pulp and paper mills is imported, only about 7 percent is of U.S. origin. German and Swedish suppliers, on the other hand, are well established on the French market. In addition, the industry is said to be rather conservative in purchasing new equipment, and plants are located outside Paris near forested areas, making sales difficult for American firms not established in France.

EDGING INTO MARKET—*Fred Lasiewicz, president of M.E.A. Inc. (left), demonstrates laser edge sensor to French engineer at pulp and paper equipment exhibition in Paris.*



TESTING THE MARKET—*At Frankfurt show, exhibitors Karlsruhen (right) and Hahn (left) of Erichsen GmbH, Wuppertal (representing John Chaillon & Sons, Kew Gardens, N.Y.), demonstrates their push-pull gauges to an interested visitor.*

U.S. Materials Testing Instruments Pass Test In Germany, Exhibitors Say

From raw materials through production to final product, almost every kind of processing or manufacturing is dependent upon materials test instruments and equipment. German industry, diverse and known for its high standards, represents a prime market for such specialties.

Twenty-five U.S. firms verified this market situation recently as they participated in the Frankfurt U.S. Trade Center exhibition of materials test instrumentation and equipment.

Critically surveying the competition, exhibitors expressed the opinion that U.S. equipment is generally superior in design, versatility, operating efficiency and durability. Rising costs of materials, freight and business expenses have offset some of the price competitiveness of U.S. equipment achieved through currency realignments, thus driving prices upward by an average of 5 percent. In materials testing, however, price is often secondary to performance; therefore U.S. equipment still remains a good value, and in certain applications its advantages are unmatched.

Best sales prospects include universal test instruments for tension and compression testing, scanning auger microprobe, acoustic emission units, dilatometers, portable analog tape recorder/reproducer systems, function generators, multichannel analyzers, polishers for single specimen preparation, real time spectrum analyzer—averagers, thermal analyzers, digital storage oscilloscopes, plastic impact testers.

Good to fair sales prospects exist for temperature chambers, vibration equipment, experimental stress analysis equipment. Some German visitors expressed interest specifically in test equipment for the textile industry, scales and non-destructive testing apparatus not on display. It is generally felt that there are no poor sales prospects for U.S. instruments and equipment in this field and that aggressive marketing and strong sales/service backup are bound to develop worthwhile business.

Future developments in testing will be rapid progress in data acquisition, analog/digital conversion, and storage; time analysis computations; display and documentation of results; signal generation for tests, and automatic test control. These developments apply to both instrumentation and equipment from chemical analysis to dynamic testing.

In current and short range developments in materials testing, independent modular units connectable to each other and to mini-computers for analysis, synthesis, and control of data will provide greater flexibility at lower cost. This involves both hardware and software options in the use of Fast Fourier Transforms:

Micro-computers, digital filters, and varied extensions of FFT techniques will be combined with larger programs. Mini-computer-based systems will do front end, on line operation testing such as data collection, display, analysis, and control. The big machines or equipment, combined with read-out abilities, will continue to perform all off-line testing such as large-scale multi-channel input/output problems and statistical error analysis.

These current, short run, and future developments are not just applicable to one given industrial application, but all industrial production of the future.

Wiesbaden Show To Display Model U.S. Steakhouse

A regional exhibition of hotel and restaurant equipment will be held March 6-11, 1976, in Wiesbaden, Germany. Among other exhibits, a model U.S. steakhouse with typical U.S. products is planned. Deadline for applying for participation is Jan. 30. Write to the fair organizer: Hotel and Gaststaettenverband Hessen e.V. D-62 Wiesbaden, Auguste-Viktoria Strasse 6, West Germany.

Fall Cannes Fashion Show

At the upcoming 11th Cannes Summer Fashion Show, Oct. 9-13, 200 French and foreign manufacturers are expected to show their collections for men, women, and children. Accessories will be included. For information on participating, write: Festival de Cannes des Modes d' ete les Residences du Grand Hotel, 45, La Croisette, 06400—Cannes, France; telex, Festwood 47854F; telephone, (93) 38.78.24.

U.S. Exhibition Results In Brief

The following summary reports have been received on U.S. overseas commercial exhibitions. Further details and marketing aata will be published as available.

Analytical Instruments for Science and Industry. U.S. Trade Center, Tokyo, May 12-16. Exhibitors, 38. Floor sales, $177,-545; 12-month projection, $5.4 million, of which firms new-to-export or-market estimate about $905,000. Representatives appointed, 2; under negotiation, 3.

Telecommunications Systems and Equipment. U.S. Trade Center, London, May 12-16. Exhibitors, 69, of which 39 were new-to-market. Floor sales, $2.8 million; 12-month projection, $45.1 million, of which $19.2 million is estimated by new-to-market firms. Representatives appointed, 17; under negotiation, 20.

Building Materials and Construction Equipment. U.S. Trade Center, Milan, May 16-20. Exhibitors, 30, representing 30 U.S. firms. Floor sales, $292,000; projected for the next 12 months, $18.3 million, of which $17.8 million is estimated by 20 new-to-market exhibitors. Agent/distributors appointed or under negotiation, 50.

Graphic Art Equipment. U.S. Trade Center, Sydney, May 26-30. Exhibitors, 29. Floor sales $582,540; 12-month projection, $6 million, of which firms new-to-export or -market estimate about $580,500.

Electronics Production and Test Equipment. U.S. Trade Center, Tokyo, June 2-6. Exhibitors, 47. Floor sales $381,970; 12-month projection, $6.1 million, of which firms new-to-export or -market estimate about $1.2 million. Agents/distributors appointed, 3.

IN MANILA—*Visitors at Process Controls USA, first U.S. Government-sponsored trade exhibition in Philippines, inspect equipment on display. Some 3,000 visitors attended.*

Process Control Show In Philippines, First By U.S., Draws Keen Interest

"These people are hungry for U.S. goods and technology."

That was the succinct conclusion of one U.S. exhibitor about Process Controls USA, the first U.S. Government-sponsored trade exhibition in the Philippines, held recently in Manila. Seventeen U.S. companies displayed the latest in process controls and energy systems, attracting more than 3,000 visitors. The show recorded $281,000 in sales off the floor and projected sales of $5.5 million during the next 12 months, of which new-to-the-market companies estimated $1.6 million.

The impressive results reflect the strong demand for process control instrumentation in the Philippines. The economy has been growing rapidly, achieving real growth rates of 10 percent in 1973 and 6 percent in 1974. The market for process control instruments showed a vigorous average annual growth of over 22 percent during recent years, reaching $2.4 million in 1973. Prospects for increased sales are excellent, as there is no local manufacture, and continued private investments in industry are now joined by expanding government expenditures on infrastructure, particularly in power, water supply, roads, and harbors.

At the opening ceremony, Philippine Secretary of Trade Troadio T. Quiazon, Jr., urged the United States to take the market seriously. "Your competitors, the Japanese, are doing so, and they are outselling you in the Philippines. In 1974, the Japanese sold us $853 million, while you did $730 million business. That was not bad on your part under free competition, but you can do better."

Secretary Quiazon pointed out, "We in the Philippines are familiar with American machinery and technology, and the American way of doing things. We also prize highly the quality of technological superiority of U.S. equipment." The Secretary concluded that the show was particularly relevant and timely, as the Philippines is now in the midst of an industrialization program.

The exhibitors shared the Secretary's assessment. Excellent showing was made in wire and cable; air compressors and air dryers; hand tools and measuring instrumentation; watt-hour meters and transformers. New instruments introduced to the Philippines were specific ion electrodes; infrared limit switches; electric alarm monitors and event recorders; and bin level controls.

SEOUL TRADE CENTER ACTIVITIES—*Among this year's U.S. Trade Center events was the American Computer Technology show, first of its kind in Korea. U.S. Ambassador Richard Sneider (second from right above), opened the exhibition, assisted by Choi Hyung Sup (left of Sneider), Korean Minister of Science and Technology, and Hahn Sang Joon (right), President of Korea Institute of Science and Technology. At INSTRU 75, a scientific, medical and laboratory instruments display (photo on right), Phark Hee Jong, Asia Science & Co., demonstrates firm's Kryostik. From ACT 75, 12-month sales are projected at $1.9 million; from INSTRU 75, $1.5 million.*

ANSWERING INQUIRY—*Exhibitor Aribe (right) gives information on Computer Automation products to a prospective client at Paris Trade Center show.*

U.S. Computer Sales Will Be Booming Soon In France, Exhibitors Predict

Complete recovery and a full boom for U.S. computer equipment in France by the last quarter of '75 or early '76 is predicted by most of the participants in a recent Paris U.S. Trade Center exhibition.

Record sales were achieved by American manufacturers at the *Printemps Informatique* Spring Computer Show. The promotion had 44 exhibitors representing 72 companies. They reported immediate sales of $3.7 million and projected 12-month business of $4.5 million as a result of their participation. These strong sales results were achieved in spite of a general slowdown in the French economy. The 2,200 visitors far surpassed the numbers for previous computer shows at the Paris Center.

Highlighting the event was a series of 14 seminars on minicomputers, microcomputers and memory technology which featured speakers from several American companies. The technical sessions attracted turn-away crowds of more than 500 technicians and engineers.

Virtually every U.S. manufacturer of minicomputers and computer peripherals demonstrated the latest in U.S. technology in a field in which there is limited French competition. Many of the exhibitors unveiled new developments for the first time in France, including new micro-circuit boards, line printers, and the hit of the show—at least according to the French trade press—a new minicomputer. All exhibitors predicted strong continued growth in the minicomputer market in France where the U.S. share is already 40 percent, and 75 percent of the peripherals. The use of microcomputers is also reported to be ready to take off, and American suppliers account for some 70 percent of the market which is, as yet, still virtually untapped.

Programmable calculators, optical readers, computer output microfilm systems, laser beam recorders, disk drives and floppy disks, data transmission equipment, and CTR displays were all reported by exhibitors to have excellent sales potential throughout France.

Although U.S. minicomputer manufacturers are well represented in France, either by subsidiaries or through agents, eight exhibitors were new to the French market and all reported extremely high interest in their equipment.

U.S. Farm Equipment Firms Sell During Verona Fair

For the second consecutive year, the Commerce Department joined forces with Agriculture and utilized space provided by Agriculture in its Verona Fair pavilion. Five U.S. manufacturers of agricultural equipment and supplies were sponsored by Commerce.

Once again the show proved its worth as the new-to-market exhibitors found a commercial response beyond their expectations. The Verona Fair's status as one of Europe's most important agricultural fairs insures the attendance of virtually every major European and Italian agricultural buyer/agent.

From the exhibition of five product lines, the success of high technology, labor-saving equipment was apparent. The two most promising products were an automatic electronic sow pregnancy diagnosis instrument and an automatic dairy cow feeding system.

The exhibitors were primarily seeking representation in the Italian market. As a result of their participation, 22 representatives were appointed. In addition, 15 new country markets were penetrated for the first time. Immediate sales of $40,000 were reported and some $1.4 million worth are expected in the next 12 months.

BIC Revises Fees For Its Export Mailing Lists

The Bureau of International Commerce, after more than two years of providing U.S. business firms with computer-produced trade contact lists, is revising the fees for such a service. Effective July 1, the price of each Export Mailing List (EML) will consist of a $10 "set-up" charge, plus 6¢ for each name printed.

The bureau provides foreign trade contact information in either standard printout or gummed mailing label form. The standard printout contains information such as name and address of the firm; name of an officer contact and his title; the year in which the firm was established; the firm's relative size; its number of employees; SIC codes defining the products of services handled by the firm and business codes which define the nature of the firm's activities; and the date of the information.

Gummed mailing labels contain the names and addresses of firms. They may be obtained with or without the name of an officer contact listed. Up to two carbon copies of the standard printout may be ordered for $3 per copy. Carbon copies of the gummed mailing labels are not available.

The $10 basic fee and the $3 for each carbon copy of the standard printout should accompany the EML request. The charge for the names printed is billed by the Export Information Division to the requesters. Additional information about the service can be obtained from any Commerce District Office (see addresses, inside back cover of magazine) or Bureau of International Commerce, Room 1033-FTIS, U.S. Department of Commerce, Washington, D.C. 20230.

Worldwide Business Outlook

Andean Integration Progress Studied As Important Crossroads Approaches

The six Andean countries — Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile—will approach an important crossroads at the end of this year. They will have reached the halfway point in their economic integration schedule which calls for, among other things, several industrial sector development programs and the establishment of a Common External Tariff (CXT). Their ability to negotiate industrial programs will be an important factor in determining if the Andean integration movement can continue to gain momentum. In early May progress was being held up due to differences among the countries in agreeing upon the assignment of products under the automotive and petrochemical programs. By year's end, a general evaluation of the entire integration program will be made by the Andean authorities.

Developments in the Andean region are being followed closely by the U.S. business community. In late March, the American Management Association sponsored a seminar in New York on the Andean Common Market (ANCOM)—developments over the next year will be studied at the AMA's next briefings on ANCOM in June 1976. Approximately 40 representatives of the U.S. business and banking communities participated in the March seminar. Speakers were drawn from business, banking, government and the legal profession. Panel discussions and an informal poll indicated mixed feelings on the part of the attendees; many expressed cautious optimism with respect to ANCOM's future; some had doubts that ANCOM could agree on industrial programming, a key to a successful ANCOM; few were strongly optimistic. The following summary of seminar proceedings was prepared by Herbert Lindow, Andean Country Specialist in Commerce's Office of International Marketing, and a participant in the discussions.

One of the principal problems expressed by most attendees concerned the "rules of the game". While some believed they could live with the restrictive provisions of Decision 24 (the Andean Investment Code), others said that they would not consider commitments in the area unless restrictions on profit remittances and foreign ownership were modified. Many expressed concern over what they consider to be the lack of uniformity with which the Andean countries are implementing their regulations. For example, the term "capital investment" seems to mean different things in different countries. Is a capital investment defined only in shares or does it also take into account debt capital? Is it defined in terms of local currency or in dollars? What conditions cover the reinvestment of earnings? These were just some of the questions which received a variety of responses, depending on the individual country's interpretations of the regulations.

Participants also expressed a great variety of views. A representative of a firm producing boiler and steam generators in Venezuela remarked that establishment of a CXT would create ideal conditions for licensing agreements. At the same time, he was worried about a recent Venezuelan decree restricting the renewal of licensing agreements. This decree put the renewal of his licensing agreement in doubt. The decree forbids, among other things, contract clauses prohibiting the manufacture or sale of a product produced on the basis of transferred technology once the initial contract expires.

Some representatives of firms producing equipment requiring major capital investments, e.g. farm machinery, said they would continue to supply the Andean markets from the United States and from other sources. In their view the Andean market was not broad enough to warrant heavy capital expenditures nor would it be feasible under the restrictive provisions of Decision 24.

One representative of a chemical and petrochemical company said it was interested in limited investments—not over $5 million—and that it is staying on the sidelines pending clarification of how individual ANCOM countries will implement their regulations. He mentioned encountering different interpretations not only among countries but within Ministries. Commenting on Venezuela's plans to produce a wide variety of petrochemicals, he speculated that Venezuela would face heavy competition in world markets as large plants in other parts of the world, i.e., the Middle East, come on stream.

Other companies were not optimistic with respect to industrial development programs in such areas as petrochemicals and automotive vehicle assembly, noting the difficulties that have arisen in ANCOM over agreement on the assignment of products. Sectoral assignments usually grant one country a number of products in which it is to specialize and supply the rest of the market. In theory this would allow large-scale production with commensurate reductions in costs. But it also requires heavy investments and availability of necessary raw materials, transportation facilities and technology. Questions are also raised as to what is to become of existing facilities that do not become part of the assignment process.

With respect to Venezuela, several attendees and speakers noted its increasingly important role in financing development and investments. The Andean Development Corporation, based in Caracas, reportedly has lent some $60 million for ANCOM projects. Further, Venezuela is expected to invest in multinational enterprises in which two or more Andean countries may be involved. Such multinational enterprises may allow up to 40 percent foreign (non-Andean) ownership.

Trade liberalization

It was generally accepted that the ANCOM countries have made a moderate degree of progress in liberalizing trade among themselves. Relative to total imports, imports among ANCOM nations increased from 3.5 percent in 1969 to 5.2 percent in 1973. Raw materials and farm commodities account for the bulk of the trade, but manufactures and semi-manufactures are beginning to account for an increasing, though modest, share of total trade.

One Midwest banker, commenting on trade and business in general, said that "there is business to be done in ANCOM". He suggested U.S. firms be flexible, patient and, above all, that they make efforts to become thoroughly

ANCOM Trade

1973 imports, in thousands of dollars

	Importing country						
	Bolivia	Chile[1]	Colombia[2]	Ecuador	Peru	Venezuela	ANCOM total
Imports, total world	249,500	985,000	875,740	532,452	1,018,549	2,522,001	6,181,242
From ANCOM, total	13,225	61,950	74,340	57,523	91,032	23,527	321,597
United States	70,610	154,100	352,840	173,236	301,723	1,058,428	2,110,937
Bolivia	.....	15,300	2,120	4	10,517	10	
Chile	N.A.	.....	12,240	1,295	6,301	1,642	
Colombia	N.A.	7,850	.....	25,964	39,333	13,312	
Ecuador	N.A.	13,200	26,960	.....	14,853	72	
Peru	N.A.	13,500	16,090	9,300	.....	8,491	
Venezuela	N.A.	12,100	16,930	20,960	20,028	.....	

[1] Estimates based on 9 months' data.
[2] Estimates based on 11 months' data.
Sources: Official trade statistics of listed countries.

familiar with conditions in each country. This is vitally important in order to meet continued aggressive third-country competition. He particularly stressed the necessity of adapting to local conditions and sales methods, pointing out that U.S. methods sometimes are not feasible in the Andean context.

The following actions were noted as highlights of the liberalization program:

- All non-tariff barriers have been eliminated among the Andean countries and, while provisions exist for the imposition of controls, these have been used sparingly.
- Tariffs are being reduced by 10 percent every Dec. 31 on some 2,370 tariff nomenclature items. In most cases tariff levels are 60 percent of their Dec. 31, 1970, starting points in Colombia, Chile, Peru and Venezuela. The goal is elimination of all duties by Dec. 31, 1980. Imports of goods originating in Bolivia and Ecuador are virtually free of duties, in accordance with preferential status accorded these lesser-developed countries.
- Goods not subject to annual reductions have been placed on "lists of exceptions" maintained by each country to protect infant industries. Goods on the lists of Colombia, Chile, Peru and Venezuela must be free of duties by Dec. 31, 1985, while Bolivia and Ecuador have until at least Dec. 31, 1990.
- Goods received for industrial sectoral programs are exempt from the general duty reductions. Once an individual sector has been programmed for development, the countries assigned production of specific products will be able freely to export these products within the region. Further protection is provided by a CXT which goes into effect by the end of the year prior to the beginning of production. At present there is only one sectoral development program in effect—**metalworking**, covering 200 products.
- In addition to reducing and eliminating duties on trade, ANCOM plans to begin, by Dec. 31, 1975, to move towards a CXT applicable to all non-Andean goods. The CXT level remains to be determined. Once established, it will be fully applied by Dec. 31, 1980.
- U.S. export sales should continue to increase in the Andean area. Exports amounted to $3,975 million in 1974 compared to $2,649 million in 1973. Although some exports may be adversely affected by internal tariff cutting and the CXT, it is felt that these losses will be small and offset by new exports of more sophisticated goods.

In summary, the ANCOM countries are on schedule with respect to trade liberalization and tariff cutting. However, whether ANCOM can meet its scheduled goals on industrial programming remains clouded in uncertainty, as does the role U.S. firms may play within the ANCOM context.

Saudis Continue Favorable Policy Toward West, Free Enterprise Role

The tragic death of King Faisal has not changed the policy, economic or political, of Saudi Arabia, reports the U.S. Embassy in Jidda. The country remains oriented toward the West and toward free enterprise, and King Khalid has endorsed the commitment of the Kingdom's enormous oil revenues to a massive modernization and industrialization plan.

Realization of this plan will bring truly dramatic change in the next decade. One million or more workers will be needed to complete the plan on schedule and huge sums must be spent on infrastructure. Rapid increases in port capacity and handling ability, imaginative vocational training programs, and an improved financial system demand urgent attention. Billions of dollars must be spent to provide adequate water supplies and to collect energy from sources now wasted (as flared gas).

Tremendous opportunities

All of this means tremendous opportunities for the American businessman. U.S. exports, particularly of construction equipment and other capital equipment, will find a growing market in Saudi Arabia. Investors will also find a favorable climate with a variety of lucrative incentives.

Saudi Arabia seeks to manage its excess revenues (still far in excess of amounts which can be absorbed locally) in a way which will minimize market disturbance and take into consideration sensibilities regarding local ownership. Much of those revenues have gone to the United States and should continue to do so.

In 1974, U.S. exports to Saudi Arabia reached $835 million—an increase of almost 90 percent over 1973 and around 35 percent of total exports to Saudi Arabia (f.o.b.). U.S. exporters should continue to improve their position. U.S. products enjoy a sizable psychological advantage, and the competitive advantages of successive dollar devaluations are still present.

In private consumption the market for non-durables will rise rapidly, but the durable market will be even more lucrative as the level of affluence of Saudi consumers grows rapidly. The exporter who will make the most profit and do the most business will be the one who arranges his exports in the most easily handled manner to help offset unloading problems (LASH ships could be one example). An entrepreneur who would be willing to break through the usual chain of distributors and wholesalers to set up low markup, high turnover, joint venture sales outlets would also have a major advantage in the Saudi market.

The Saudi population probably does not exceed 6 million and in absolute terms only a small percentage of those are in the affluent category at present. Thus, capital equipment will offer the best market for U.S. exporters over the next decade. Power generating equipment, construction machinery, telecommunications equipment, almost anything which can conceivably fit into this category will be in high demand. Among the highest priority items are likely to be materials handling and hospital equipment. Desalination equipment has enormous possibilities.

The Saudis will also be spending very large amounts in the near future to modernize and improve their armed forces. A number of commercial opportunities should be available in that field. Saudia Airlines, which has proved to be a very profitable venture, will also be looking for additions to its fleet and equipment in the near future.

Massive construction contracts will be let during the immediate future. Although problems of manpower and access to materials supply will be a challenge, major profits will be made. American construction companies should get more than their share of contracts if they make the effort needed to get to know the market and its characteristics. Management, training and turnkey type contracts will also offer very lucrative opportunities. The largest contracts will be in the public sector and will require diligent effort by the potential contractor. Residential construction offers some very real possibilities.

In addition to the massive government-sponsored or owned petrochemical projects—the steel and aluminum plants and so on—a great deal of effort is being made to encourage medium-sized local industry. Tax holidays, low-cost energy, extremely generous financing terms and a variety of other incentives are available to foreign firms engaging in joint venture projects. Foreign investment is not only welcomed, it is actively sought for the technology and managerial expertise it can bring. Here again, American firms enjoy a significant traditional advantage in Saudi Arabia.

The Saudi Government has already invested significant amounts of its surplus revenue in the U.S. economy. The bulk of this money has moved into government securities and, to a lesser extent, short and medium-term deposits with U.S. banks. There are indications, however, that more and more of that money will go into private corporate debt and even

into equities, as Saudi Arabia seeks to diversify its holdings. At this time the policy of the country is to avoid any movement of capital which would have a destabilizing effect on financial markets or which would create political questions regarding foreign (Saudi) ownership or control.

U.S. firms interested in joint ventures in the developing world should give active consideration to the possibility of financial assistance from Saudi Arabia, especially if plans involve the Arab world.

The Saudi Economic Development Fund will have $1.5 billion in capital paid in by 1977 and will ultimately receive another $1.3 billion. The Saudis are also active in the Arab Investment Company (located in Riyadh), the Islamic Development Bank (located in Jidda), the African Development Bank and a variety of similar institutions.

A Technical Cooperation Agreement was recently signed by the U.S. and Saudi governments, thus providing a framework in which the U.S./Saudi Joint Commission will provide extensive expert assistance to the Saudi development effort. A variety of projects, involving as many as 100 experts, are already under way. The Joint Commission will also provide a framework within which both governments can encourage and facilitate cooperation in the private sector. In addition, an investment guarantee agreement became effective April 26.

Foodgrains Lead Massive But Uneven Reentry Into Booming Iraqi Market

U.S. exports to Iraq have soared since mid-1973, when the Government of Iraq ended a partial boycott of American products. Sales went from $23 million in 1972 to $285 million in 1974 and $89 million during the first three months of this year. At the same time, continues T. Patrick Killough, Commercial Attache at the U.S. Embassy in Baghdad, Iraq advanced from twelfth to fourth place among the 19 Arab markets for U.S. exports—after Saudi Arabia, Egypt and Algeria.

In 1974 U.S. sales to Iraq were clustered in four areas: foodgrains (575,000 tons of wheat and 31,000 tons of rice worth $110 million); civil aircraft and spare parts ($55 million); industrial machinery ($28 million); and steel pipes ($19 million).

Sharp contrast

U.S. exports scattered among other sectors were modest but well above 1973 figures in most cases. This concentration of U.S. sales within a handful of sectors of the Iraqi economy contrasts sharply with the more balanced, across-the-board export pattern of America's major free enterprise competitors: Japan, West Germany, France and the United Kingdom, which between them shipped more than a billion dollars worth of goods to Iraq in 1974.

Iraqi demand for agricultural goods will persist and grow in 1975, predicts Killough. U.S. wheat and rice should continue strong in the marketplace and American firms have now begun to compete to fill large Iraqi Government orders for yellow corn, tobacco, feedgrains, potatoes, live cattle, frozen chickens, eggs, milk powder and a variety of seeds and seedlings. There is also a growing U.S. response to the steady flow of Iraqi Government calls for tenders to supply pharmaceuticals, industrial explosives, trucks, passenger cars, earthmoving and roadbuilding equipment, agricultural machinery and tractors, building materials (especially lumber), communications equipment, office machines, hospital and surgical instruments and equipment and other lines of industrial and scientific technology.

A handful of U.S. firms have so far won contracts for major economic development projects, for example, oil export facilities near Basra in southern Iraq (Bannister-Price; Brown and Root), for the modernization and reequipment of Iraqi Airways (Boeing), and for design, construction and management of modern hotels in Baghdad and Basra (Sheraton). Like their European and Japanese competitors, American firms are reacting with caution to the Iraqi Government's strong preference for turnkey performance on a fixed price basis. Nonetheless, several score U.S. firms are now making offers or negotiating for such projects as a $340 million aluminum smelter; a billion dollar university of technology; a new international airport and a rapid transit system for Baghdad; sewer systems for all major cities of Iraq; pipeline, railroad and highway schemes; urban and rural housing projects; cinemas and theaters; and others.

Rich in oil, the water of the Tigris and Euphrates Rivers, and arable land, Iraq is a market clamoring for imported food, industrial goods and technology. Surprisingly, the country has not yet been visited by nearly as many American businessmen as Egypt, Lebanon, Kuwait or other Arab lands since the fall of 1973. This puzzling lack of personal attention by U.S. businessmen is, however, changing, and 1975 has already seen the chairmen of the boards of Chase Manhattan Bank and the Allis-Chalmers Corp. present in Baghdad. In April the Governor of Mississippi brought with him a 17-person agricultural and industrial trade mission—the first U.S. trade mission to visit Iraq since 1967.

Hotel space is scarce and Killough advises American businessmen to line up an Iraqi private or government sector contact before visiting the country in order to help secure lodgings and to identify and make appointments with key officials in the government ministries which do most of the nation's importing and contracting. Visits by Americans are still an infrequent enough occurrence that a businessman making his first calls on government buyers is often pleasantly surprised to be asked: "Where have you been these last couple of years? What took you so long to come?"

BUSTLING BAGHDAD—*This article by U.S. Commercial Attache T. Patrick Killough includes some advice for American businessmen contemplating a visit to Iraq.*

U.S. Merchant Marine Suppliers Seen Missing The Boat In Greece

U.S. firms capable of supplying the Greek shipping industry have yet to discover that Greece is a major and sophisticated market in which American equipment is increasingly competitive, both in technological quality and price, according to Norman M Bouton, Commercial Attache at the U.S. Embassy in Athens.

The Greek market in shipbuilding, repair, and supply is one of the world's largest. In gross terms, the Greek-owned fleet comprises more than 4,400 vessels, or upwards of 44 million tons. Well over half, or 3,149 vessels, are under the Greek flag, the remainder sailing principally under the flags of Panama, Liberia and a few others. Over half the Greek flag fleet is made up of bulk or combination carriers; over a third is tanker tonnage. The range of ownership stretches from 13 owners of more than a million tons each, to several hundred owning from one to 15 vessels for an aggregate of 30 million tons. Over 825 shipping companies maintain offices in the Athens-Piraeus area.

Though the world's merchant marines have been hard hit by the slackening of tanker demand and recessionary economic conditions, the Greek fleet has been less affected than the fleets of other maritime powers. As of mid-April only 208 vessels, or 5.9 percent of Greek-owned tonnage, were laid up, compared with 20-30 percent for several of the other major national fleets. The President of the Association of Greek Shipowners announced recently that the Greek order book for new building amounted to 25 million tons. Other industry sources assert that cancelled construction over the last five months is as low as 2 million tons. Japanese shipyards lead, though there has been a modest shift of late to European yards.

Why has the Greek fleet been so lightly affected? Principally because it is an older fleet with smaller sized units. With slackening tanker demand, larger, relatively inflexible units have been squeezed out first. Cargo ship activity, though affected by world economic conditions, seems to have suffered considerably less so far than the world's tanker tonnage. Though Greek shipowners have been trading up to larger and more technologically complex vessels in recent years, the fleet is still comprised mainly of dry cargo vessels, relatively simple and labor intensive. More than 60 percent of Greek flag vessels are over 15 years old, while only 17 percent are less than four. By tonnage, however, the same comparison is 35 percent and 31 percent, marking a distinct movement in the fleet's composition to larger, more technologically complex vessels. The editors of the Greek shipping journal, *Naftiliaki*, estimate that Greek shipowners spend more than $7 billion annually to cover the cost of operating, maintaining and renewing this rapidly growing and modernizing fleet.

Greece's shipyards have undertaken major expansion programs recently. Hellenic Shipyards is now constructing a series of nine 30,000 dwt product carriers. Both Hellenic and Elefsis Shipyards have begun turning out series bulk carriers in the 37,000-43,000 dwt range. Both have planned construction of new graving docks: Hellenic for 500,000-ton and Elefsis for 300,000-ton vessels. Neorion Shipyard, on the island of Syros, plans to move from solely ship repair to construction. To this end, Neorion will construct a new drydock capable of handling 80,000-dwt ships and a graving dock for 200,000-ton ships. Several smaller yards in the Piraeus-Perama area are producing 5,000-6,000 ton general cargo vessels and cruise liners up to 9,000 tons. License applications for at least 2 major new shipyards have been presented to the Greek Government in recent months. In addition, the Port of Piraeus announced a 1975 procurement program of $13.3 million, which would include a 28,000-ton and a 6,000-ton floating dock as well as sizable quantities of lifting and moving equipment.

The total tonnage of ship construction (over 1,000-ton) in Greek yards has steadily increased in recent years: from 71,140 grt (10 ships) in 1971, to 73,950 grt (9 ships) in 1972, to 95,980 grt (10 ships) in 1973. The 1974 order book for Greek yards included 36 new vessels totaling 324,000 grt, and for 1975 totals 53 vessels amounting to 480,000 grt.

Ship repair has always been the main effort of Greek yards and further rapid growth in ship repair activity is expected. The total number of ships and tonnage drydocked and repaired in Greek yards amounted to 1,680 vessels of 15.8 million dwt in 1971; 1,857 vessels of 20.8 million dwt in 1972; and 1,871 vessels of 21.9 million dwt in 1973. Figures for 1974 are not yet available but are estimated to be slightly lower than 1973 chiefly because of regional political instability then. With reopening of the Suez Canal in 1975, the repair and service sectors should take a major leap upward, as Greece is ideally located to again benefit from the heavy traffic through the Canal.

In this tremendous market, there is almost no U.S. presence. There was a time when a supplier could argue that Greek shipowners' procurement decisions were not made in Greece. This is no longer the case to an increasing degree. At the more basic level of paint and nuts and bolts, perhaps as many as 75-80 of the Greek shipping offices located in Piraeus have final control, while between 35-40 of these offices exert control over the shipping companies total purchasing policy. In virtually all cases, moreover, the local office has recommendatory responsibilities to its home office, be it London or New York. The *Naftiliaki* editors asserted that they know of not one American representative to the Greek shipping industry resident in the Athens-Piraeus area. Only one American shipyard has a local representative. Yet, a local American businessman told Bouton that he had tried unsuccessfully for over three years to obtain representation of U.S. yards, despite the fact that he is contracting for $6 million in ship repairs annually for his British and South African principals.

The increasing importance attached to the Greek shipping market by other supplier countries was well illustrated at the June 1974 Posidonia exhibit—Greece's biannual manifestation of homage to its shipowners. Over 2,000 suppliers and organizations from more than 20 countries attended. Over 179 had displays at the exhibit (up from 109 two years ago). Major pavilions were mounted by the United Kingdom, Japan, Italy and the Scandinavian countries. The U.S. Department of Commerce mounted a catalog exhibit with catalogs of 180 U.S. firms, with two specialists in attendance. Only 20 U.S. firms, however, had their own stands, and five of these represented financing or classification interests; this showing in a maritime exhibit which many consider to have surpassed Rotterdam's

PORT OF PIRAEUS—*A 100-ton floating crane is in front of passenger terminal.*

Europort and to equal Oslo's Norport in importance to the maritime community.

The only bright spots in an otherwise dull horizon focus on financing and ship classification. The six American banks which realized the potential for ship financing by locating in Piraeus have captured the lion's share of the business there and have forced European and British banks to consider local establishment to remain competitive. In addition, the local office of the American Bureau of Shipping increased its registered new constructions in Greece from 44 vessels of 216,000 grt in mid-1971 to 85 vessels of 300,000 grt by end-1974. Repair surveys by ABS also increased by 50 percent over the same period, reaching 40-45 vessels per month by end-1974.

Why is the U.S. maritime supply industry so absent from the Greek market? Local businessmen tend to reply with all the stock answers. U.S. yards and other goods and services are too expensive. Transportation costs are too high. Delivery from the United States is erratic, and when the supply market tightens, the small countries get squeezed out of the market. Most telling of all is the accusation that American suppliers are simply not interested and have defaulted to the Japanese and Europeans.

The first two arguments have been increasingly undercut over the last three years by the progressively competitive adjustment of the dollar combined with rising labor and materials costs in the competing sectors of other supplier countries. In other sectors, certainly, U.S. suppliers have awakened to their competitive position and realized the opportunities that are available in the Greek market.

But American suppliers to the merchant marine industry are missing the boat in Greece, Bouton concludes.

American firms will have an opportunity to take advantage of some of the opportunities Bouton describes in this article by participating in a Commerce-sponsored port and shipyard trade mission to Greece, Italy and Yugoslavia in November. Interested companies should call 202-967-2973 for information.

Philippine Challenges Formidable; Economy Doing Surprisingly Well

Despite severe pressures in 1974 brought on by the oil crisis, worldwide inflation, falling export demand due to recession in major markets and related effects on domestic activities, the Philippine economy achieved a real growth of 5.9 percent as compared with 9.9 percent in 1973. Exports and imports reached record levels, and strong invisible and capital inflows resulted in an $80 million balance of payments surplus. Although challenges ahead remain formidable, the economy has good prospects for meeting its 5 percent growth target this year. Potential for U.S. investment and exports remains attractive, adds the U.S. Embassy in Manila.

The Philippine economy is heavily dependent on developments in agriculture and is interlocked with the fortunes of two key industrial nations, the United States and Japan. Prospects for agricultural production are good in 1975, as the government continues infrastructural development, facilitates credits and subsidizes fertilizer use.

Gains in agricultural production will help contain inflation and will stimulate real aggregate demand. The incipient decline in the consumer price index is reassuring the government in undertaking expansionary measures to stimulate the economy. Forty percent of the budget will be devoted to development, concentrating on four major areas—food production, low-cost housing, tourism and infrastructure. These priorities are designed to revive certain industries such as cement and forestry, bolster purchasing power in rural areas, increase tourist receipts to help offset expected trade deficits and provide infrastructural requirements for growth.

Prospects for moderating inflation appear more promising in 1975 than in previous years.

Expectations are for a trade deficit of about $500 million this year, but the Philippines will weather the balance of payments impact of this deficit through borrowings which largely are already arranged. Total exports in 1975 are not expected to increase to any significant degree above last year's record $2.7 billion, while the import bill may rise slightly above the $3.2 billion level of last year. Sizable invisible earnings will help offset much of the trade deficit, but it will be necessary in all probability to increase borrowings, perhaps from the $800 million recorded last year to near $1,000 million in 1975. Concessional loan commitments from donor countries, IBRD and ADB are expected to be about $425 million.

Expiration of the Laurel-Langley Agreement on July 3, 1974, had no perceptible effect on the continued development of commercial and economic relations between the United States and the Philippines. In 1974 the United States continued to be the principal market for Philippine exports and took $1,156.7 million or 42.4 percent of them, while Japan accounted for 34.8 percent.

In investments, the United States continued to increase moderately its equity in the Philippines, while Japanese investments soared 1,751 percent. Total U.S. investments, however, are still by far the largest and probably represent almost $2 billion in terms of currently appraised value.

Technical discussions of a successor agreement to Laurel-Langley were held in Manila last July. With passage of the Trade Act of 1974, which includes the new U.S. Generalized System of Preferences, negotiations are expected to resume in the fall of 1975.

As a result of the large shadow cast by the increased cost of oil, the U.S. share of Philippine imports dropped from 28 percent to 23 percent in 1974, and likewise the Japanese share went down from 32 percent to 28 percent. In absolute terms, however, the United States increased its exports by 63 percent, from $449.5 million in 1973 to $730.7 million in 1974. This performance reflects recovered competitiveness of U.S. goods and the growing requirements of a developing Philippine economy.

The Embassy has undertaken an expanded program of assistance to U.S. exporters and investors, including a greater variety of market research and establishment of a U.S. Business Center where local agents can mount displays. On April 22-26, the Embassy mounted the first U.S. Government-sponsored trade exhibit in the Philippines (see page 26), an exhibition of process controls, instrumentation and energy systems equipment. In 1976 the Embassy will host a timber industries trade mission and a health care industries technical seminar. These themes reflect Embassy market research on most salable product categories.

Machinery other than electric predominates among U.S. export lines. Excellent potential lies in heavy duty construction, earthmoving, mining, and hotel and restaurant equipment. Agricultural products continue to be significant U.S. exports, as the Philippines is likely to obtain most of its requirements for wheat, cotton and soybean meal from the United States.

The government's increased expenditures on infrastructure and private investments in construction, mining and industry will generate demand for capital equipment and raw materials. Also, U.S. exports of machinery and raw materials follow those U.S. companies which have discovered that increased sales and protection of a market lie in licensing or manufacturing in the Philippines.

The investment climate remains favorable, and while the government is receptive to investments in export-oriented and labor-intensive industries, it has expressed interest in inducing foreign investments in iron and steel, fertilizer, copper smelting, shipbuilding, paper and pulp.

Honduras Plans Heavy Expenditures For Disaster Relief, Other Projects

This is a "Year of National Reconstruction" in Honduras, according to a declaration made by the government after the country was struck severely by Hurricane Fifi in September. Donald McNally, Commercial Officer at the U.S. Embassy in Tegucigalpa, reports that an estimated $60 million will be spent on hurricane-related reconstruction activity. In addition to disaster relief programs, the government has non-hurricane related investment projects totaling approximately $200 million either now under way or to be undertaken within 12 to 18 months.

Recent political developments in Honduras are not expected to affect these programs adversely.

The reconstruction activity, non-hurricane related investment projects, and various programs created under the National Development Plan (NDP), initiated in January 1974, will provide sales opportunities for U.S. producers of items such as: agricultural products, including plows, tractors, irrigation equipment, fertilizers, insecticides, water pumps, etc.; heavy construction equipment, cement, reinforcing bars, etc.; housewares and hardware; educational supplies and equipment; and medicinal and pharmaceutical items.

The $200 million of non-hurricane related investment activity will be spent mostly on several large projects. They are: 1) initial studies toward construction of a large hydroelectric dam at El Cajon and expansion of the present hydroelectric plant at Rio Lindo; 2) the addition of 22,000 telephones in Tegucigalpa and San Pedro Sula; 3) construction and equipping of four large hospitals and several smaller clinics; and 4) construction of two large tourist hotels, in San Pedro Sula and Tela.

Formation in 1974 of the National Corporation for Forestry Development, COHDEFOR, should lead to increased imports of items such as saw-milling equipment, chain saws, lumber handling and transportation equipment. The National Investment Corporation, CONADI, established to foster growth in the industrial and tourist sectors, will attract increased imports of industrial machinery and hotel equipment—products in which U.S. manufacturers are highly competitive. The recently enacted agrarian reform law is expected to result in increased demand for U.S.-manufactured tractors, plows, hand tools, fertilizers, pesticides, etc. The creation of a chain of retail grocery stores, BANASUPRO, will lead to imports of American-made refrigerators, freezers, check-out registers, price-marking equipment, etc.

Honduran buyers purchased approximately $210 million of U.S.-manufactured goods in 1974 and are expected to account for almost $225 million in 1975. Principal Honduran merchandise imports in 1974 were non-electric industrial machinery, paper and paper products, transportation equipment, cereals, flour, etc.

Real growth of the small, export-oriented Honduran economy in 1974 is estimated at 0.9 percent. The poor showing resulted from the economic consequences of Hurricane Fifi, particularly GNP losses in the crucial agricultural and livestock sector of the economy. The Central Bank of Honduras predicts that GNP in 1975 will decrease 2.7 percent in real terms in comparison with 1974 for the same reason. However, capital goods purchases should increase markedly in 1975-76.

Honduras incurred a balance of payments deficit of $114 million in 1974 as a consequence of rapidly rising costs of petroleum and finished goods imports, the increased purchase of goods in order to build up inventories, and the weaker international market for its principal exports of bananas, coffee, meat and wood. Banana production, which accounts for about 40 percent of Honduran exports, dropped off drastically during the last quarter of 1974. Fortunately, Honduras has received substantial amounts of credit from international financial institutions and is expected to be able to finance the large trade deficits of 1974 and 1975.

Offering significant potential

"Big ticket" projects scheduled for the coming 12 to 18 months that should offer significant sales potential for U.S. manufacturers are:

▸ **Electricity generating and transmission:** The Honduran National Power Company (ENEE) is expected to call for bids soon for a $17 million project to expand generating capacity at the Rio Lindo facility.

ENEE has received preliminary commitments from the World Bank, Inter-American Development Bank, and Central America Bank for Economic Integration (CABEI) for $175 million for a 1,730,000 kwh/year hydroelectric dam at El Cajon. ENEE spokesmen report that construction of this $250 million-plus project is expected to start in mid-1976 and end in 1981.

ENEE plans to integrate the cities of Omoa, El Triunfo, and Marcovia into the national electric power network this year. This will mean sales opportunities for U.S. producers of transformers, insulators, electric cable, etc.

▸ **Hospital construction and equipment:** The $7.3 million university hospital in Tegucigalpa is now under construction but decisions regarding equipment have not yet been made. That aspect of the project will provide significant opportunities for U.S. producers of such products as food preparation and serving equipment, sterilization devices, laundry equipment and operating theatre equipment.

The Social Security Institute of Honduras is planning construction of a large hospital in San Pedro Sula.

The Honduran Army plans to buy about $1 million of hospital equipment to outfit its military hospital in Tegucigalpa.

▸ **Potable water systems:** CABEI has supplied $11 million to finance the Los Laureles project to increase and improve the supply of potable water for Tegucigalpa. Construction of the dam which will form the reservoir is scheduled to begin in 1975. Sales opportunities for water pipe, meters, etc. can be expected later this year.

The city of San Pedro Sula is studying plans to rebuild parts of its water supply system destroyed by Hurricane Fifi. Additional purchases of water systems products are anticipated later in 1975.

▸ **Highway construction:** The Directorate General of Public Roads plans to complete construction and paving of the Tegucigalpa-Danli highway in late 1975. It also plans to construct and pave a road linking Tegucigalpa and Talanga, the first stage of the Tegucigalpa-Juticalpa project, bids for the remainder of which are expected to be published during the second half of 1975.

Other highway projects scheduled to begin this year are the La Ceiba-Elixir-Olanchito road ($12 million) and construction of an $11 million "beltway" in Tegucigalpa.

▸ **Agricultural equipment:** The Ministry of Natural Resources inaugurated a $14.5 million program in late 1974 aimed at modernization and mechanization of agricultural activities in the northern region of the country. Sixty American-made farm tractors have already been purchased under that program and other farm machinery and implements and 38 jeep-type vehicles are expected to be acquired soon.

▸ **Tourism:** Private investors plan to begin construction in mid-1975 of a 214-unit hotel in San Pedro Sula that will cater mainly to tourists but will also have facilities to handle large conventions. In late 1975 or early 1976, the group plans to begin construction of a 200-unit tourist hotel on the beach near Tela. Construction costs of these projects will exceed $5 million.

Additional trade opportunities will stem from port construction work at Puerto Cortes and San Lorenzo, installation of color television broadcast equipment in Tegucigalpa, and construction of new sugar mills in Talanga and Rio Lindo, an organic fertilizer plant at Tamara and two new private schools in Tegucigalpa.

Swaziland Offers Healthy Economy, Access To Africa

Swaziland is a small country, the second smallest in Africa, but it has a healthy, diversified economy that offers a number of opportunities for American investors and businessmen. Prosperity in recent years has been due to the sugar boom, but Swaziland—located between the Republic of South Africa and Mozambique—also produces and exports important quantities of wood and wood pulp, iron ore, asbestos, citrus fruit and canned foods. The tourist industry, largely dependent on South African visitors, has also been an important asset to the economy. Assuming reasonable political stability in southern Africa, Swaziland's economic prospects are excellent, according to the U.S. Embassy in Mbabane.

Thanks to its profitable export industries, Swaziland has had a positive balance of payments since independence (1968). Last year was particularly good; exports in 1974 increased a remarkable 66 percent in value over 1973, to a total of about $180 million. Sugar exports alone earned about $65 million and wood pulp more than $45 million.

Imports also increased, but much more slowly, by 16.8 percent over 1973, to a total of about $114 million. Most of this rise was due to higher prices, particularly of petroleum products. Thus, Swaziland had a positive balance of trade in 1974 of about $68 million, a record high.

Approximately 80 percent of Swaziland's exports go out through the port of Lourenco Marques in Mozambique; Swaziland has no direct railroad link with South Africa. By contrast, 90 percent of the country's imports come from or through South Africa. Major imports are machinery and transport equipment (23.8 percent), general manufactured goods (16 percent) and fuels and lubricants (10.7 percent).

Since Swaziland is a member of both the Southern African Customs Union (with South Africa, Lesotho and Botswana) and the Rand Monetary Area, factories in Swaziland have free access to the 20 million people in this market. At the same time, investors in Swaziland have the possibility of selling their products in other African countries. Swaziland is also signatory to the Lomé Convention with the EEC, thereby acquiring for its exports a special place in the European market.

A number of important new development projects are being discussed. These include:

- **Luxury Class Hotel:** Swaziland already has an impressive group of hotels and motels, including the Royal Swazi Spa and Casino, in the Ezulwini Valley between Mbabane and Manzini. The government is looking for an international hotel company to establish another, similar hotel, either in this area or elsewhere in Swaziland.
- **Third Sugar Area:** Swaziland is studying the possibility of creating a third major sugar area that would increase annual production to about 300,000 tons a year. Feasibility studies are now being completed. If the project is approved, total cost of land development work, water storage facilities and the new sugar mill is estimated at about $100 million.
- **Thermal Power Project:** Swazi authorities are discussing with the South African Government and the World Bank the creation of a large thermal power station. Present plans call for initial installation of two 100-megawatt generators which would be powered by Swaziland's extensive coal deposits. Most of the electricity generated would be sold to South Africa until Swaziland's needs expand sufficiently to absorb full output of the station. If this project gets under way, it will offer important export opportunities to U.S. engineering firms and suppliers.
- **New International Airport:** Swaziland is considering construction of a new international airport to replace the outmoded facility at Matsapha. An exhaustive study has been prepared by Netherlands Airport Consultants, financed by the African Development Bank. This project, if implemented, is expected to cost about $25 million.

Prospects for direct export sales by American companies in Swaziland are less promising. Most local wholesalers and retailers are subsidiaries of South African or British companies, or have long established links with South African importers. Nevertheless, several important local companies, such as those in the sugar industry, buy substantial quantities of capital equipment directly from U.S. firms. As Swaziland continues to develop, opportunities for sale of American products, either directly or through South African middlemen, will increase.

U.S., Korea Facilitate Arbitration

An agreement between the American Arbitration Association and the Korean Commercial Arbitration Association for the settlement of trade disputes was signed recently. The agreement encourages firms of both countries engaged in trade to settle commercial complaints by the arbitration services offered by the association. For further information on the U.S.-Korean Arbitration Agreement contact Robert M. McLaughlin, Far East Division, OIM/BIC, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-2215.

OECD Again Pledges To Avoid Trade Curbs

Current challenges to an open world trading system were discussed at two meetings that brought U.S. trade officials to Europe recently for high-level policy discussions.

At one, the ministerial level meeting in Paris of the Organization for Economic Cooperation and Development (OECD), the industrialized nations renewed a pledge to avoid restrictive trade practices as a remedy to balance-of-payments difficulties.

At the other, the semi-annual consultations between the U.S. and the Commission of the European Communities in Brussels, discussion included energy and raw materials issues, relations with the developing nations, U.S. countervailing duty legislation and rules of origin applicable within the Common Market-EFTA free trade area.

The OECD trade pledge was extended to May 1976. The signatories—all the OECD countries except Portugal—said they would avoid recourse to new restrictions on trade and other current account transactions, or artificial stimulation of exports. Pressures from economic downturns and rising unemployment during the past year led the OECD ministers to consider it important to renew the pledge and maintain close cooperation on averting curbs to normal trade flows.

The ministers also discussed commodity policies and assistance to the developing nations (see *Commerce Today*, June 9, page 24).

India Survey Notes Instrument Prospects

A market survey recently conducted by the U.S. Consulate in Bombay indicates a large potential market in India for a broad range of sophisticated scientific, medical, survey and industrial instruments.

Products in the following categories have the highest sales potential: SIC 3545200—precision measuring tools; SIC 3811200—laboratory and scientific instruments; SIC 3811300—surveying and drafting instruments; SIC 382500—instruments to measure electricity; SIC 383200—optical instruments and lenses; SIC 36137—control circuit relays; SIC 36220—general industry power circuits and devices; SIC 382900—nuclear monitoring instruments; SIC 384100—advanced surgical, medical and dental instruments and appliances.

While the potential market is high for sophisticated U.S. instruments, the study notes that availability of foreign exchange is a limiting factor. Good local agents, which are numerous in India, are essential

for introducing new products and developing the market. The transfer of technology through licensing and joint ventures may be an appropriate vehicle for U.S. manufacturers to market their products.

The report, entitled *Market Research in India for Scientific, Industrial and Medical Instruments,* includes comprehensive lists of institutions engaged in scientific research, industrial and professional associations, advertising media, potential agents, instruments manufactured in India and other information pertaining to the Indian market. It is available from the National Technical Information Service, U.S. Department of Commerce, P.O. Box 1553, Springfield, Va. 22151. Specify DIB No. 75-06-500; the cost is $10 per copy.

U.S.-Brazilian Trade Study Shows Fast Expansion Rate

An analysis of U.S.-Brazilian trade from 1969 to 1974, recently prepared by the U.S. Consulate General in Rio de Janeiro, shows rapid expansion during this six-year period.

The United States has long been Brazil's leading trading partner, both as a purchaser and supplier. Between 1969 and 1974, Brazil's imports of U.S. products grew by 407 percent, from $613 million to $3.1 billion, whereas exports to the United States increased by 179 percent from $610 million to $1.7 billion. Last year, Brazil's imports from the United States grew by 78 percent, confirming long-run expectations that continued Brazilian economic development and industrialization will enable the United States to remain a leading supplier. This sustained growth will be contingent on the continued favorable combination of U.S. technology, financing and competitive prices.

Overall, Brazil's exports jumped from $2.3 billion in 1969 to $7.9 billion in 1974. Imports, however, grew twice as fast, increasing from $1.9 to $12.6 billion. Much of the current increase is attributable to rising fuel costs, which helped double Brazilian imports from $6.1 billion in 1973 to $12.6 billion last year; Brazil's fuel bill in 1974 was $2.9 billion, up sharply from $770 million in 1973.

Aside from the sharp rise in oil imports, there has been a rapid increase in Brazil's imports of semi-finished and finished products, particularly machinery and instruments, iron and steel, plastic materials and fertilizers. On the export side, Brazil has substantially expanded its agricultural exports—predominantly sugar, coffee and soybeans—while also increasing exports of industrial products such as road vehicles and tractors, footwear, textiles and electrical machinery and appliances.

Copies of the 16-page report may be obtained from the Brazil Group, OIM/BIC, U.S. Department of Commerce, Washington, D.C. 20230.

International Business Reports

Trade Lists on Saudi Arabia and Jamaica. Published by the U.S. Department of Commerce. $3 each.

Provide exporters with names and addresses of prospective agents, distributors and end-users of their products and services in the subject countries. Part of a program that covers traders in 130 foreign countries.

Write: U.S. Department of Commerce, DIB/1033-EID/TL, Washington, D.C. 20230, or any Commerce District Office.

Handbook of Comparative World Steel Standards, Tokyo. 420pp. $100.

Reference book which gives a perspective view of steel standards of six major industrial counties—United States, France, West Germany, United Kingdom, USSR and Japan.

Write: The International Technical Information Institute, Toranomon-Tachikawa Bldg., 1-6-5, Nishi-Shimbashi, Minato-ku, Tokyo.

Housing Finance: Present Problems. Published by the Organization for Economic Cooperation and Development. 100pp. $4.50.

Under this title are three reports by OECD's Financial Markets Committee's Working Party on Housing Finance. They deal with a number of policy issues that have emerged in recent years in OECD member countries in the field of housing finance and consider ways and means of solving the problems involved by drawing on experience gained in some member countries. *Housing Under Conditions of Financial Restraint* examines how residential construction in major OECD countries has been affected by policies of credit restraint and high interest rates in a generally inflationary climate; *Time-Path Problems of Debt Service and Their Implications for Financial Institutions and Financial Markets* starts from the experience of many countries that traditional financing and debt servicing techniques in housing create a number of problems; *Special Circuits of Housing Finance* compares significant cases in France, Germany and Britain.

Write: OECD Publications Center, Suite 1207, 1750 Penn. Ave. NW., Washington, D.C. 20006.

Directory of Hungarian Foreign Trade Companies 1975. Edited by the Hungarian Chamber of Commerce. 256pp.

This booklet contains the export, import and production lists of foreign trading companies and those authorized to carry on foreign trade activity together with addresses of banks, advertising agencies, and representatives of foreign firms in Hungary as well as Hungarian foreign trade representation abroad. It gives a brief survey on the services and publications of the Hungarian Chamber of Commerce, an article on 30 years of Hungarian foreign trade and tables on Hungary's exports and imports.

Write: Hungarian Chamber of Commerce, Press and Information Department, H-1389 Budapest, P.O.B. 106.

Electric Current Abroad. 1975. Published by the U.S. Department of Commerce. 88pp. $1.15.

Describes the characteristics of electric current in over 150 countries and more than 2,000 major cities around the world. Shows the type of current; number of phases; frequency (in hertz per second) and its stability; voltages; and number of wires to commercial and residential installations. In addition, the basic and most commonly used plug in each country is described.

Write: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or any Commerce District Office.

Calendar For World Traders

June 25-27 — New York — Seminar on Current Issues and Problems in International Taxation, World Trade Institute.

June 26 — Springfield, Mo. — Greater Ozarks International Trade Club dinner meeting, Kings Table Cafeteria. Mitchell P. Kobelinski of the U.S. Export-Import Bank will discuss Exports and Eximbank: Moneymakers for the U.S. Economy.

July 10—Bakersfield, Calif.—International Trade Development Conference. Robert Shaw of the Bureau of International Commerce will speak.

July 10—Memphis—Mid-South Exporters Roundtable dinner meeting, Monte's & Sons Restaurant.

July 10-11—New York—American Management Associations seminar on the Domestic International Sales Corp. (DISC).

July 15—Memphis—World Trade Club meeting, Southwestern University. Film: Welcoming International Visitors to the U.S.A.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

Licensing, Investment Abroad

SENEGAL — Several companies have expressed interest in establishing ties with U.S. firms active in the following fields: (1) **architectural and construction services;** (2) **fishing;** (3) **manufacture of ball point pens;** (4) **operation of cold storage facilities;** (5) **fishmeal production;** (6) **agricultural equipment and machinery manufacture;** (7) **poultry raisand processing;** (8) **beds, boxsprings and furniture manufacture;** (9) **cardboard manufacture;** (10) **operations of hardware stores;** (11) **ship repair facilities;** (12) **apparel manufacturing.** In most cases, joint venture arrangements are of primary interest. Agency and representative agreements would be considered. Write: Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230, for names and addresses of persons to contact for additional information; please identify special project of interest. P-75403. OPIC.

1500—NIGERIA—Well known construction company seeks joint venture to engage in **building and civil engineering projects.** U.S. participant should have capability in construction of apartments, offices, schools, highways and bridges; is offered 60 percent ownership in proposed enterprise. Would train Nigerian staff, provide technical expertise. Nigerian firm has worked on a supermarket and apartment complex. Claims to be in good position to receive major construction contracts. Harold Sodipo, Harold Sodipo & Co., Ltd., 19 Alaska St., P.O. Box 213, Yaba, Lagos. Telephone: 43396. WTDR. P-75390. OPIC.

2000—SRI LANKA—Major food processing and exporting company wants joint venture arrangements with U.S. companies to expand its operations. Following products, mainly for export markets, currently are being processed: **lime and passion fruit juices; essential oils and oleoresins; fish and shrimp; poultry and pork products.** Ceylon Cold Stores Ltd., P.O. Box 220, Colombo 2. P-75402. OPIC.

2392, 2591—UNITED KINGDOM — Producer of **roller window blinds** and **shower curtains** seeks to manufacture or assemble same under license. Established in 1903, firm employs 22. Company markets products through stores and plumbers/builders merchants in United Kingdom and other EEC countries. The factory, covering an area of 20,000 sq. ft., is located in Paisley, Scotland, and is not fully utilized. R. McNeill, Director, Pickles (Paisley) Ltd., 62 Espedair Street, Paisley, PA2 6RJ, Scotland. P-75400.

2452, 3272—PORTUGAL—Portuguese Confederation of Industries, large association of business enterprises, seeks **financing** from U.S. lenders, for **major housing program** in Portugal. Plans call for 40,000 lower medium and medium priced homes and apartments to be built over next four years by consortium of Portuguese architectural, design and construction firms. Total project is estimated to cost $900 million, with need for external financing projected at $200 million. Financial package will include external loan through syndicate of Portuguese Government public credit institutions, contributions of employers, insurance company sources, and private house buyers. External loan would be repaid within five years and there is possibility of Portuguese Government guarantee. Write: Antonio Vasco de Mello, President, Confederacao Da Industria Portuguesa, Avda. 5 De Octubro, 35, 1 Andar, Lisboa 1. P-75401.

2649—UNITED KINGDOM—Manufacturer of wallcoverings seeks to expand product line. Is interested in producing **wallpaper, vinyl wallcoverings and allied products under license, or finishing and converting body stock for sale in U.K.** Company operates large modern plant and distributes to main wholesalers throughout U.K. Employs 120. M. W. Worley, Managing Director, Worley Wallcoverings Ltd., Corringham Road, Gainsborough, Lincolnshire, England. P-75393.

2834—GERMANY—Seeks licenses to produce pharmaceutical products that act on cardiovascular system; respiratory system; and **central nevous system and sense organs.** Company is a leading manufacturer, distributor and exporter of pharmaceuticals; established in 1906, employs 2,000, and has annual sales of $96 million. Chief, Economic/Commercial Section, American Consulate General, D-4 Duesseldorf 30, Cecilienallee 5. P-75405.

2869—INDIA—Seeks technical know-how to extract **sterols from wool grease.** Firm currently processes greasy wool imported from Australia, and also manufactures pharmaceutical grade lanolin. Its processing plant, at Jagatdal, about 25 miles from Calcutta, has capacity to process about 15 million lb. of greasy wool per year, which would yield about 150 metric tons of wool grease annually. Firm, Woolcombers of India, Ltd., is part of Duncan Bros. group of companies, one of India's major business houses. D. K. Kapur, Executive Director, Duncan Bros. & Co., Ltd., Hindustan Times House, 12th Floor, 18-20 Kasturba Gandhi Marg, New Dehli 110001. P-75392. OPIC.

2879—TURKEY — Seeks know-how from U.S. firm to produce **lindane** from BHC. Company is producer of chemicals including hydrochloric acid, caustic soda, sulfuric acid, chlorine gas, DDT, and BHC. U.S. firms interested in discussing transfer of lindane production know-how for fixed fee should contact Hadi Gurlen, Klor Alkali Technical Manager, Koruma Tarim Ilaclari A.S., Salipazari, Dursun Han, Kat 5-6, Findikli, Istanbul. P-75386. OPIC.

3079—BRAZIL—Seeks technical know-how and possible joint venture to produce **plastic products by direct injection and blow molding.** Founded in 1970, firm has 100 employees. Polyester Utilidades do Brasil S/A, Rua Jose de Alencar, 44-B, Conjs. 114/115, 11° Andar, 50.000 Recife, Brazil, WTDR. P-75416. OPIC.

3241—UNITED ARAB EMIRATES — Invites participation of American firms in formation of UAE joint venture company for **cement batch plant.** Capitalization of proposed company is estimated at $250,000. U.S. joint venture partner can contribute equipment and technology in lieu of cash. Firm would aslo like to award American concern management contract. Write: Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75404.

3312, 3531, 3613—GERMANY—Firm seeks licenses from U.S. firms for manufacture of **steel structures, cranes and track switch gear for power plant installation.** Firm is contractor for building of specailized steel structures, e.g., specialty cranes, harbor equipment, refinery and power plant equipment. Firm founded in 1920, employs 120. Hermann Siemens, Klaas Siemens, Hammerstrasse 5-7, 297 Emden. P-75388.

3441 — UNITED KINGDOM — Leading British bridge and structural fabricator desires to expand its interest, in particular assembly or manufacture of plant and machinery where major part of work involves **welded fabrication.** Company's preference would be for heavier type of repetitive production work as company is equipped with cranage to lift up to 40 tons in individual pieces. In bridge and structural fields, firm would also be interested in third countries engineered in U.S. Company employs 900. E. H. H. Wooderson, Director, Braithwaite & Co., Structural Ltd., 59 Church Rd., Great Bookham, Leatherhead, Surrey KT23 3JJ, England. P-75398.

3523—INDIA—Seeks license to manufacture **seed and grain cleaners, graders and dryers, seed store houses;** also, **cotton acid delinting machinery, seed germinators and germination heaters, scourers, separators and other seed treating machinery.** Firm produces cotton ginning equipment and presses. Wants to diversify its manufacturing activities in seed machinery line. Representative of firm plans to visit U.S. for several weeks in July. Write (through July 15): N. Ramachandran, Chief Technical Executive, Patel Brothers, c/o Carver Div., Rockwell International, 1502 Chestnut St., Dallas, Tex. 75226. Indian address is Patel Bros., 6 Veer Nariman Road, Bombay 400 001. P-75414. OPIC.

3551—PERU—Seeks technology to manufacture **spinning machines and power looms.** Recent study envisages establishment of plant with capacity for producing 160 spinning machines and 950 power looms annually. Estimated cost of project is $8.1 million, including $3.7 million for equipment. Project would be undertaken by local enterprise and financed by government agency. Write: Ing. Jaime A. Montoya, Direccion General De Industrias, Ministerio De Industria y Comercio, Calle Oeste, Monterrico, Lima 27. P-75396.

3572—PERU — Seeks technical assistance for projects to manufacture **typewriters and cash registers.** Total cost of project is estimated at $10.3 million, including $5.5 million for equipment and about $450,000 for feasibility studies. Plans calls for establishment of plant with annual capacity of 100,000 typewriters (portable, office and electrical types) and 2,000 cash registers. Project

would be undertaken by local form of enterprise and financed by government agency. Write: Ing. Jaime A. Montoya, Direccion General De Industrias, Ministerio De Industria y Turismo, Calle Oeste, Monterrico, Lima 27. P-75397.

3600—CHILE—Large firm seeks license to manufacture **gas cooking ranges, household refrigerators (8-9 cu. ft.), industrial refrigerators, household washing machines, space heaters, liquid gas bottles and kerosene hot plates.** Jean Marie De Saint-Pierre, Director, Ferriloza S.A., Casilla 1199, Tarma Tambo 2706, Santiago. P-75391.

3621—DENMARK—Large company seeks license to produce **reluctance motors in ¾ to 15 kw.-range.** Eventually, company visualizes moving into manufacture of motors above 15 kw. Presently, company makes automatic controls for refrigeration, heating and electrical installations, hermetic compressors and motor starters and relays for a.c. motors. Exports on worldwide basis through subsidiaries and an extensive distribution network. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75399.

3651—TAIWAN — Seeks joint venture to manufacture **programmed tape recorders** and **multi-memo timers.** Estimated cost of project is $3 million, including machinery and equipment for proposed plant. Requested of U.S. partner is financial and technical assistance in return for 50 percent equity, plus management control. Plans call for annual production of 40,000 units of tape recorders, timers, and multi-cartridges. Taiwanese firm indicates that 80 percent of output will be exported. Raywend Wang, Manager, Tachuen Electric Corp., 22 Young Kang St., Taipei. WTDR. P-75389. OPIC.

3679—INDIA—Leading company seeks joint venture to manufacture **digital multimeter switch regulated power supply sophisticated reed relays.** Indian firm is interested in obtaining technical know-how and capital from U.S. participant. Further information is available from Intercraft India, 16A, Naraina Industrial Area, Phase II, New Delhi 110028, or Trade Development Authority of India, 666 Fifth Ave., New York, N.Y. 10019; phone, 212-586-5066-7. P-95394. OPIC.

3679—UNITED KINGDOM—Seeks license to manufacture **data conversion or data communication equipment.** Firm produces high speed data acquisition systems and distributes electronic instruments, data conversion systems and transducers. It represents several U.S. companies. R. I. Horton, Managing Director, V-F Instruments Ltd., Northgate Mansions, 110 Northgate St., Gloucester, England. WTDR. P75395.

7392—BELGIUM—Brussels located commercial company offers to represent U.S. companies in Europe. Firm would organize contacts and promote sales. Would be interesting collaboration for small or middle size companies which do not want to invest money to open office in Brussels. Contact: Ms. Doris Atkind, Trade Promotion, European-American Banking Corp., 10 Hanover Square, New York, N.Y. 10005. Telephone: 212-623-3600. P-75387.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248) referring to the appropriate file number.

ENGLAND—Large manufacturer of wide range of **components and equipment** for **electronic and telecommunications industries,** specializing in wound wire components, is interested in licensed manufacturing arrangements with U.S. companies in complementary product lines. File 2767

GERMANY—Manufacturer is interested in locating U.S. licensees to produce its **cable and wire installation trunkings** made of flame-resistant hard-PVC, and its clamps, strips, sockets and dividing strips. File 2768

GERMANY—Manufacturer is seeking U.S. licensee to produce its **industrial furnaces** that are particularly suited for wire industry. File 2769

GERMANY—Manufacturer is seeking U.S. joint venture partner to produce in U.S. its **terminal boxes and housings or enclosures for electrical, electronic and pneumatic components, and circuit boards.** Products are made of aluminum, polyester and Makrolon. File 2770

GERMANY — Company offers to U.S. licensees its patented **liquid soap dispenser** and filling units for use in washrooms. File 2771

SWITZERLAND—Medium to large company specializing in sheet metal work, light engineering and sun screens is offering its patented **aluminum sun breaker fins** for manufacture in U.S. by U.S. company. Fins provide controlled diffusion of light entering a building, and protect against glare and solar heat gains. File 2772

Machine Tool Monthly Plans U.S.-German Licensing Issue

The German Machine Tool Manufacturers Association, a leading industry association, is planning a special October issue of its monthly, "Licensing and Joint Venture Opportunity." The issue will be devoted to developing licensing and joint ventures between American and German firms. The association is prepared to publish proposals from U.S. companies seeking licensing and joint venture agreements. In view of the publishing deadline, material must be received no later than July 15. All inquiries and proposals should be sent to Peter Lemke, Verein Deutscher Maschinenbau-Anstalten E.V., 6 Frankfurt/Main Niederrad 71, Lyonerstrasse 18, Germany. P-75406.

Romania Seeks Cooperation In Environmental Protection

The Romanian National Council For Environmental Protection (NCEP) is seeking to solve technological problems in the field of environmental protection with U.S. firms and organizations. The suggested procedure is for both parties to contribute their expertise to selected problems. The Romanians are prepared in many instances to provide research personnel, some facilities and pilot plants. The U.S. side would be expected to provide in some cases equipment, technology, controls, etc.

The following are subjects of interest to NCEP:

Production of active carbon from coal, carbon residues from petroleum and chemical industries, and from other organic residues; development of processes for the regeneration of active carbon at facilities that use absorption techniques; utilization of inactive Lindane isomers found in solid wastes; utilization of biological sludge as fodder; production of absorbing resins to remove organic impurities from water; incineration of watery residues.

Also, production of semi-permeable membranes for water dissolved impurities; technologies to produce oxygen in biological treatment solutions; utilization of microsieves in waste water treatment; optimization systems and automatic controls in water treatment plant operations; neutralizing plants for waste water treatment in metal coating plants operating on a continuous flow and open loop basis; development of countercurrent regeneration mixed bed and superimposed ionic bed filter systems.

In addition, construction of thermoelectric power plant stacks to ensure increased diffusion of pollutants resulting from combustion; methods for desulphurization of exhaust gases resulting from large thermoelectric power plants operating on lignite or bituminous shales; pure oxygen biological treatment of waste water from pulp and paper plants; methods and facilities for treatment of waste water from nonferrous metallurgical plants; methods and facilities for treatment of waste water from copper and copper alloy plants; methods and facilities for treatment of waste water containing industrial sulfates.

Also, methods and facilities for treatment of industrial ammonia salts and free ammonia from waste flows; methods and facilities for treatment of organic wastes from industrial waste water; methods and facilities for treatment of waste waters containing cutting machine emulsions; storage units for industrial water including settler cyclones for the separation of mill scale from mill waste water.

Individual and scientific organizations interested in learning more about the foregoing cooperative projects in Romania should contact: Paul Terlizzi, Bureau of East West Trade, U.S. Department of Commerce, 202-967-2884.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

Foreign Trade Inquiries

These trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Anthracite coal

1111XXX—AUSTRIA—100,000 m/t anthracite coal for blast furnaces. Inquirer seeks offers from coal mining plants capable of delivering desired quantity during August-December 1975 period. Offers in English or German including analytical data and price quotations c.i.f. Hamburg or Bremen requested. Payment terms: L/C or c.o.d. Reply to—Alfred Guttman, Owner, Alfred Guttman, Hippgasse 41, A-1164 Vienna. Cable: Grossgut: tel: 92 32 50. Ref.—Oesterreichische Laenderbank, Vienna.

Building construction

• **151XXXX—EL SALVADOR**—Ministry of Public Health invites engineering building contractors of International Development Bank member countries to bid on construction of: a) six 10 to 11-room "health-unit" buildings, and b) sixteen 6 to 7-room "health post" buildings (Tender identification Concurso No. 29/75). Cost estimated at $600,000. All will be built throughout El Salvador, distributed in three groups. Approximate construction area in Group No. 1 will be 1,650 square meters; 1,500 square meters in Group No. 2; and 1,650 square meters in Group No. 3. Bids for building one, two or the three groups will be acceptable. Financed jointly with funds of IDB Contract No. 301-1/75-IDB and Government of El Salvador. Technical tender specifications, plans and bidding regulations available for 100 colones (US$40) at Direccion de Ingenieria de Salud, Ministerio de Salud Publica y Asistencia Social, Calle Arce 827, San Salvador, and can be reviewed there. Specifications/regulations are not mailed by that office. Bids to be sent in Spanish to above office by July 11.

• **151XXXX—HONDURAS** — Ministry of Natural Resources is seeking bids for construction of some 6,164 square meters of buildings for Agricultural and Cattle Investigation and Extension Project. Structures include agency offices, general warehouses, residences and a greenhouse. Bid documents available for 50 lempiras (US$25) per set from: Lic. Fernando Daniel Montes M., Minister, Secretaria de Recursos Naturales, Departemanto de Ingenieria, 70. Piso, Banco Nacional de Fomento, Comayaguela, D.C., Honduras. Proposals should be accompanied by certified check or bank bond effective for minimum of 90 days for 2 percent of proposal payable to Ministry of Natural Resources, as guarantee that bidder, if awarded contract, will comply with contractual documents. Financed by Inter-American Development Bank Loan 310/SF-HO to Honduras. One set of bid documents may be reviewed in Room 2118, U.S. Department of Commerce, Washington, D.C., 202-967-3602.

• **151XXXX, 162XXXX—LIBYA**—Council of Nutrition and Sea Wealth invites international contractors and manufacturers to bid for construction and installation of five fish chilling and freezing units in Zuara, Tripoli, Homs, Misurata, and Benghazi, consisting of buildings, ice plant, chilling and freezing unit, electricity and water networks. Tender documents and specifications available upon payment of LDS 500 (US$1,740) from Council of Nutrition and Sea Wealth, Shara Abou Harida, Tripoli. Initial guarantee of LDS 40,000 (US$139,200) required). Bid deadline June 30. Tender is indivisible. Interested firms must be registered in Libya or be represented by registered firm. Tenders must be accompanied by certificate stating experience, qualifications and financial status. Aly Sellak Establishment, P.O. Box 2559, Tripoli, is willing to enter into joint venture with established company, carrying out installation and civil work, the company supplying equipment.

Heavy construction

• **162XXX—TUNISIA** — Tender for construction of one 220-meter sulfur pier and two quays (40 meters each) in port of Sfax. Tender specifications bearing marking, "Appel d'Offres du Port de Commerce de Sfax," should be received prior to July 10 by: Monsieur le President Directeur General de l'Office des Ports Nationaux Tunisiens, Batiment Administratif, la Goulette, Tunis. Tender specifications available from this address against payment of 50 Tunisian dinars.

Broad woven fabric mills, manmade fiber, silk

• **222XXXX—GERMANY** — Government requests 25,000 meters of pearl gabardine pique (45 percent shorn wool, 55 percent polyester) in several shades of gray. Bids and samples must be submitted before Aug. 5. Tender documents and specifications can be obtained by writing Kleiderkasse fuer die Bundeswehr, 54 Koblenz, Casinostr. 26-30. (Correspondence requested in German.)

Broad woven fabric mills, wool

• **223XXXX—GERMANY** — Government requests 26,000 meters tricot (100 percent pure shorn wool) of which 17,000 meters would be light gray and 9,000 meters dark gray. Bids and samples must be submitted before Aug. 5. Tender documents and specifications can be obtained by writing Kleiderkasse fuer die Bundeswehr, 54 Koblenz, Casinostr. 26-30. (Correspondence requested in German.)

Paper mills

• **26210—ECUADOR**—One 2500-3000 kw diesel engine driven generator set. Bid deadline July 31. Empressa Electrica Regional Del Sur, P.O. Box 150, Loja. Specifications may be obtained from above address for $40 (nonrefundable). Three-year financing required. Therefore, it is suggested only firms with locally established agents familiar with credit sales to government agencies participate in this tender.

Agricultural chemicals

• **28700—INDONESIA**—2,500 tons of granular, compound, mixed, or straight fertilizers. Tender No. AG/5/75. Bid deadline July 25. Requests for tender documents and bids should be submitted to Ir. A. Rahman Rangkuti, Project Manager, North Sumatra Smallholder Development Project, Aek Nebara, Rantau Prapat or P.O. Box 418, Medan, North Sumatra.

Steel mill products

• **331XXXX—PAKISTAN**—5,000 long tons of 100 lbs. rails. Tender No. PR-I/75/TR/2; bid deadline July 7. Railway Board, Ministry of Railways, Government of Pakistan, Empress Rd., Lahore. Tender documents available at above address for $7.

• **33100—INDIA** — 20,000 ft. drill pipes, 2⅜"-2⅞" conforming to API specifications. No bid deadline, quotations requested on immediate basis. P. R. Bhattacharjee, Drilling Superintendent, Oil India Ltd., Duliajan, Dist. Lakhimpur, Assam, India. No formal tender documents. Further information at above address.

33176XX—CHILE — Seamless steel tubing under API-5A latest edition, 8 round threads, 2⅞"OD, range 2, external upset ends, 6.5 lbs./ft. Different grades and weight/ft. mainly H-40, J-55 and N-80 for grades. Seamless steel casing under API-5A latest edition, 8 round threads, threaded & coupled from 5½" OD to 9⅝" OD long coupling range 3. Grades J-55 and N-80. Cable—Arturo Fermandois S., Casilla 1843, Valparaiso. Cable Fernandois ITT Valparaiso. Est. value $10,000,000.

Rolling, drawing, & extruding of nonferrous metals

• **3352XXX—PAKISTAN** — Telegraph and Telephone Directorate General, Zero Point, Islamabad, has issued Tender No. PUR. 3-28/74/810 for carrier composite aluminum sheathed cable and accessories. Bid deadline Aug. 6. Copy of specifications available on short-term loan basis to firms located in U.S.

from Science and Electronics Division, BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-5569.

● **3357XXX—EGYPT** — Director of Stores and Purchases, Telecommunications Organization, Opera Exchange Bldg., Cairo, has issued Tender No. 15/75/17 for supply, delivery and supervision of installation of four coaxial cables. Includes multiplex, line, power, cables, trunk test boards, hybrids and all necessary installation materials and test equipment. Bid deadline July 19. Copy of specifications available on short-term loan basis to firms located in U.S. from Science and Electronics Div., BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-5569.

Fabricated metal products

3499498 — 30793XX — 3811229 — 3842351 —MEXICO—350 pairs steel mesh gloves to replace rubber gloves being used in beer bottling plant, various sizes; 6 metallic guards for standard size carpentry shop machines including circular ripsaw, bandsaw, joint planes, shaper, finisher; 1 emergency kit to seal chloride gas leaks from 1,000 kilogram stationary cylinders in brewery, including all tools & plugs; PVC mats of about 2 sq. meters ea. in size. At present 2 mats required with probability that large number will be ordered after samples tested on brewery floors. Firm is one of Guadalajara's largest breweries with headquarters in Orizaba, Veracruz, Mexico, & plants throughout Mexico. Produces and distributes 7 popular brands of beer. Satisfactory trade contact. Write—Marco Antonio Gutierrez, Chief of Industrial Safety, Cerveceria Moctezuma, S.A., Ave. Lazaro Cardenas 975, Guadalajara, Jalisco. Tel. 120675.

Engines, turbines

● **3511XXX—COSTA RICA** — Hydraulic turbines and turbine generator sets. Notice No. 2777. Bid deadline July 7. Instituto Costarricense De Electricidad, Hugo Castro, Chief of Purchasing Dept., Apartado 10032, San Jose. Specifications (in Spanish) may be obtained from above address for $58.14.

Construction, mining, materials handling machinery, equipment

● **35330—SYRIA**—Supply of following oilfield machinery: Petroleum production testing units, bid deadline July 10; Two-phase execution units for oil field cementing operations, July 14; Petroleum treatment center, July 21; Petroleum exploration equipment, July 12. Conditions and specifications available for L.S. 10 ($1.00=L.S. 3.65). Tender and performance bonds are 1 percent tender price and 5 percent contract price, respectively. Cite tenders 4250-4253, respectively. Write to: Syrian Petroleum Co., Al-Mutanabi St., Damascus.

Metalworking machinery

● **35490, 36230, 35670 — SINGAPORE** — Laboratory equipment: 5 AC arc welders, 34 gas welding sets, two muffle furnaces, an optical pyrometer, six metallurgical microscopes, one sectional model of a jet engine and one variable compression engine. Tender No. ME/ADB/2C/75. Bid deadline July 14. Lee Ching Jin, Assistant Registrar, Ngee Ann Technical College, 535 Clementi Rd., Singapore-21. Tender copies may be obtained from above address for $500 per copy ($480 refundable to unsuccessful bidders.)

Special industry machinery

3552146 — 9913302 — NICARAGUA — Complete spinning machinery, 20,000 spindles, for mfg. approx. 300,000 lbs. cotton yarn monthly. Value est. U.S.$1 million. Above equip. wanted for spinning plant project to be undertaken by Infomac, Nicaraguan Industrial Dev. Agency. Information wanted: brochures or catalogs on equip., general data, cost, availability of used equip., etc. Turnkey job offers will be considered. Reply ASAP to—Ing. F. J. Franco, Project Officer, Departamento de Fomento y Desarrolo, Instituto de Fomento Nacional, Apartado Postal 629, Mangua. Cable Infonac, phone 3111.

● **3559441—INDIA**—Supply of two vulcanizers for vulcanizing conveyor belts of widths of 800 to 1,524 MM and two vulcanizers for on the spot repairs to conveyor belts. Bid deadline July 15. Vulcanizers should work preferably in 220 volts, 50 hz., single-phase, a.c., however, vulcanizers working in 440 volts, 50 hz., 3-phase, a.c. will also be considered. Tender documents available for 15 rupees each. Make bankers' checks payable to: Deputy Chief Accounts Officer, (Engineering), Madras Port Trust, Madras, 600001. Correspondence with tenderer should be through: Chief Engineer (Project), Madras Port Trust, South Beach Rd., Madras 600001. Cite Tender No. U2/6692/75/E, f.o.b. quotations requested. Payment in hard currency. Delivery should be made within six months from date of placing order.

General industrial machinery

● **3561XXX, 3585XXX, 3823XXX, 3829-XXX—SINGAPORE** — Supply of teaching equipment for laboratories and workshops of Department of Engineering, Ngee Ann Technical College. Bid deadline July 14. Tender No. 559/01/T-0022. Bid documents available for $500 each ($480 refunded to unsuccessful bidders). Write: Lee Ching Jim, Assistant Registrar, Ngee Ann Technical College, 535 Clementi Rd., Singapore 21. Tender deposit will be refunded (minus $20) to successful bidder upon contract completion. Items sought include: 1 two-stage centrifugal pump set, 1 single-cylinder, double-action reciprocating pump, 1 laboratory vacuum pump, 1 automatic process control demonstration equipment set, 1 air-conditioning laboratory unit, 1 refrigeration faults simulator, 1 pelton wheel water turbine of reaction or pressure type and 1 temperature demonstration panel. Also, sectional refrigeration components mounted for display, automatic air-conditioning education systems, fatigue testing machine, drafting machines, meteorology laboratory equipment, etc.

Electrical industrial apparatus

● **3621XXX—INDONESIA**—Supply and installation of diesel power station including three 2000-kw diesel generator sets and supply of materials for MV transmission and LV distributor system. Tender No. 104 INO (SF)/1-2/Diesel—T&D/75. Bid deadline July 7. ADB loan. Perusahaan Umum Listrik Negara, Direktorat Pembangunan, Jalan Sunan Mgampel No. 1, (4th Floor), Kebayoran Baru, Jakarta. Tenders may be obtained from above address.

Communications equipment

● **3661XXX—MALAYSIA** — Director General of Telecoms, Telecommunications Department Headquarters (Telex/Data Section), Bukit Mahkamah Kuala Lumpur 05-01, is requesting bids for supply of frequency-modulated voice-frequency telephone equipment, each system capable of providing 20 channels of 50 band, 12 channels of 100 band, and 6 channels of 200 band. Bid deadline Aug. 19. Further information available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-5569.

● **3662XXX—TURKEY** — Deniz Kuvvetleri Komutanligi, Ikmal Dairesi Baskanligi, Tedarik Subesi Mudurlugu, Ankara (Naval Forces Command), is seeking four sets RT/CW training systems, consisting of keys, microphones, loudspeakers, earphones, headsets, tape recorders and tone generators. Bid deadline July 7. Copy of specifications available from Modern Translation Bureau, Karanfil Sokak 49/2, Yenisehir, Ankara, for $8.50.

Railroad equipment

● **37430—SOUTH AFRICA** — Government invites suppliers to bid for electric locomotive, A.C. type, Tender No. 1020 70664. Tender documents available from Chief Stores Superintendent, Rm. 3, Melhof, 2 Melle St., Braamfontein, Johannesburg, against payment of deposit of R50 per set, and R50 per additional set. Drawings may be purchased for R100 per set, not refundable. Bid deadline Oct. 24.

Pens, pencils, office, artists' materials

39500—GERMANY — Established manufacturer and exporter of pencils and office supplies seeks U.S. sources of all types of writing instruments; also erasers and sharpeners. Direct sale and distributorship. Delivery and payment to be negotiated. Reply to Mr. Kremer, Product Manager, Schwan-Stabilo, 8500 Nuernberg, Maxfeldstrasse 3; tel. 0911/36551.

Manufacturing industries

3999611—GERMANY—Sheep skins tanned & dyed, shorn & unshorn. Needs large quantities for mfg. seat covers. Estab. 1949, second largest mail order with dept. store chain in Germany. Operates 35 stores & 100 smaller retail outlets including supermarkets. 20,454 employees. Financial ref.: BHF Bank, Frankfurt. Reply ASAP to—Dieter Nueller, Importabteilung, Neckermann Versand KG, 360-400 Hanauer Landstrasse, 6 Frankfurt/Main 1. Cable—Neckermannversand; tel. 0611-404353.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Metal stampings

34621XX/31XX—AUSTRALIA — Iron & steel forgings; nonferrous forgings. Interested in contacting U.S. suppliers above items for direct sale. Company is a major Australian heavy engineering co. Pending price delivery, continued supply, potential annual sales amount to $500,000. Quantity required: A. 8 size 54″ dia. outside; 50″ dia. inside; 5¾″ deep. B. 8 size 73½″ dia. outside; 66¼ dia. inside; 15¼″ deep. Delivery 24 weeks from June 1. Reply to Mr. W. Carter, Purchasing Officer, Vickers Ruwolt Pty. Ltd., 524 Victoria St., Richmond, Vic 3121. Phone 03/422711.

Household appliances

3634350—FRANCE — Electric irons. Firm has market in Rhones Alps region of France for above. Estab. 1950 this corp. capitalized at 150,000 francs, employs 6. Annual volume of sales 1,200,000 francs. Large retailer of electric household appliances. Sells mostly U.K., Swedish, German, Italian & French apparatus. Has after sale service. Financial ref. Internationale Westminster Bank, 37 Rue de la Republique, 69002 Lyon. Good credit appraisal. Reply to—Roger Bert, Pres., Presidelec, 11 Rue President Carnot, 69002 Lyon.

Future Construction Abroad

ALGERIA — Algerian State Metallic Constructions Corporation is accepting bids on a **turnkey plant to manufacture stainless steel equipment** for chemicals, petrochemicals, food industries and buildings with a capacity of 4,500 metric tons per year. Offers are due by Aug. 15 and should be submitted by registered mail to Direction du Development, Sn. Metal, Route de Meftah, Oued Smar. B.P. 25, El Harrach, Algiers (Cable DPMetal Alger, Telex 52889). Bids should be in French in five copies, remain valid 4 months past bid deadline, and cover references to similar works, guarantees, personnel training, technical assistance and credit terms. A copy of tender document in French is available for reference with Ms. Cherie Loustaunau, Rm. 6015A, U.S. Dept. of Commerce, Washington, D.C. 20230, telephone 202-967-4441.

PAPUA NEW GUINEA—Firms interested in prequalifying for **reconstruction of the highlands highway from Munum to Waterais** can obtain necessary documents from Michael Sharwood, Project Manager, Lea-Cameron Joint Venture, P.O. Box 1948, Boroko, Papua New Guinea; telephone Boroko 54736; cable Leacameron Boroko. Deadline for submission of documents is Sept. 1. A copy is available in the Export Information Reference Room, Rm. 1063, United States Department of Commerce, Washington, D.C.

UPPER VOLTA — Government intends to draw up list of participating companies in limited tender for construction of **Ouagadougou-Tambao railroad** (339 kilometers). Qualifications should be forwarded by July 31 to General Office of Tambao Projects, P.O. Box No. 12, Ouagadougou. Companies or groups of companies willing to stand for preselection will receive on request following documents: a.) notice of preselection (shortlisting), b.) general information note, and, c.) technical note of introduction (presentation). Documents, in French, available at: General Office of Tambao Projects, P.O. Box No. 12, Ouagadougou; or Embassy of Republic of Upper Volta, 5500 16th St., NW., Washington, D.C. 20011. OPIC.

EL SALVADOR—The Ministry of Public Works invites contractors to send information on their qualifications for reconstruction Comalapa-Rio Lempa Hwy. approx. 49.5 km. long with total cost estimated at $5 million. Qualification forms available at Embassy of El Salvador, 2308 California St. NW., Wash., D.C. 20008. They must be completed, in Spanish, and delivered to: Direccion General de Caminos, Final Avenida Peralta, Terrenos el Coro, San Salvador, El Salvador, no later than 2 p.m. July 24.. Paved highway to be 7.30 meters wide, must have 2.35 meter wide shoulders. For construction purposes project divided into 2 sections: 1) 25.4 km. Comalapa-Zacatecoluco, 2) 20.5 km. Zacatecoluco-el Playon-Rio Lempa. Principal work on first section includes: earth moving, removal of existing pavement, pacing of sub-base & base, paving reconstruction or enlarging minor drainage systems, dismounting & reconstruction of enlarging of six 20 to 40 meter long bridges, & of one ten span bridge, each span 12 meters long. Work on 2nd section includes minor land grading at a small section, reconstruction of shoulders, and paving. Invitations to bid will be sent to qualified bidders on or about Aug. 22. Work on this project expected to be completed within 26 months. Jointly financed by Government of El Salvador, Central American Bank of Economic Integration & US AID.

INDIA—The Government has applied for an IDA credit for **development of Jhamer Kotra rock phosphate deposits in State of Rajasthan and setting up of beneficiation plant.** Jhamer Kotra accounts for nearly 90 percent of India's total output of this much-needed basic raw material (145,520 metric tons in 1973). Total cost of proposed beneficiation plant is est. at about $80 million. Mr. S. Sunder, Deputy Secretary, Department of Fertilizers & Chemicals, Ministry of Petroleum & Chemicals, Shastri Bhavan, Dr. Rajendra Prasad Rd., New Delhi 110001, is in charge of planning and executing project in consultation with State government of Rajasthan. OPIC.

ARGENTINA — Energy Secretary Miguel Revestido, Av. Julio A. Roca 651, Buenos Aires, announced the government's **five-year electric power plant construction plan.** The plan includes: 26 hydroelectric plants, seven thermal power plants, three nuclear power plants and two pumped storage plants, all to be undertaken by 1980. Revestido stated that intention is to increase installed generating capacity of Argentina, presently 7621 MW, to 15,085 MW by 1980. The three nuclear plants would be Atucha I, Rio Tercero (Embalse) and Atucha II. Largest of the hydro plants would be Yacireta (4,050 MW), followed by Piedra del Aguila (2,400 MW), Chihuido (2,000 MW), Salto Grande (1,620 MW), and Cordon del Plata and El Chocon (1,200 MW ea.).

CANADA—An emergency short-term sale of natural gas to the United States will result in construction of a new **gas transmission link between Alberta and British Columbia.** The sale will require construction of facilities in Alberta Gas Truck Line (AGTL) system in Alberta and Westcoast Transmission Co. system in British Columbia. About 38 miles of 12-inch pipe will be laid from Worsley area in northern Alberta.

ITALY—The first contract on the massive Gioia Tauro Steel Mill Project has been awarded to a consortium of Italian construction companies headed by Dipenta; others are Sogene, Astaldi, and Logidiani. Consortium's name is "Cogitau". Contract is for $120 million for excavation and construction (civil works) of port at Gioia Tauro. Main work will involve dredging, excavation and materials movement. U.S. firms able to offer advanced equipment or systems may wish to contact consortium at: Signor Pignocchi, Ufficio Approvvigionamenti, c/o Cogitau, Corso Trieste 95, Rome. Gioia Tauro is massive $900 million project for construction of steel mill complex and accompanying port and infrastructure in Calabria region of southern Italy.

The Overseas Private Investmeni Corp. (OPIC) offers political risk insurance to U.S. construction firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's construction insurance program, write Information Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-1854.

SWEDEN—The government approved plans **to expand petrochemical installations** at Stenungssund on west coast. Together with new satellite plants, some $500 million will be invested at site during remainder of decade, providing opportunities for U.S. suppliers of chemical processing equipment. Additional information and contacts on above projects available from U.S. Dept. of Commerce, Trade Opportunities Program, Rm. 2321, Washington, D.C. 20230. 202-967-2251.

MEXICO—Technical Department of Ferrocarriles Nacionales de Mexico (NdeM) has completed study calling for new **network of suburban trains to link Mexico City with principal industrial and residential suburbs,** costing est. $1 billion. Project has received government approval. Financing has not yet been determined, and construction is not likely until 1977. Total network would be approx. 250 kilometers, divided into six lines. All lines would have double track, be electrified, and be above ground with overpasses. Proposed system would require trains of nine cars each, self-powered with electric motors and holding maximum of 220 passengers, constructed out of stainless steel and aluminum, with filtered air instead of air-conditioning and interior lighting. An initial supply of 600 cars is est. Secretariat of Public Works will construct roadbed and do engineering work; there is significant opportunity for sales of U.S. rail equipment, especially self-powered electric cars. Interested manufacturers contact Ing. Eduardo Harfuch K., Jefe del Departmento Tecnico, Ferrocarriles Nacionales de Mexico, Avenida Central 140, 11°, Piso, Mexico 3, D.F. Tel: 547-86-41.

JAMAICA—The government has approved plans for construction of new **radio and television complex** for Jamaica Broadcasting Corp. (JBC). Plans include: construction of 80,000 sq. ft. three-story building at site near Jamaica's National Stadium, provision of three more television broadcast channels, installation of new transmitters to serve both AM and FM radio as well as television and taking over of transmitter maintenance from Radio Jamaica, privately-owned radio station. Overall cost of this phase is U.S.$10 million and work is expected to start during 1975/76 fiscal year during which JBC is due to buy U.S.$1.1 million of transmission equipment. This part, which includes replacement of some present equipment for black and white TV, due to be completed by 1978. Second phase, not yet approved, involves introduction of color television, expected to cost U.S.$8 million. Interested firms contact: Dwight Whylie, Gen. Mgr., or Newton James,, Chief Engineer, Jamaica Broadcasting Corp., 5 South Odeon Ave., Kingston 10. OPIC.

THAILAND — Electricity Generating Authority of Thailand, Nonthaburi, is in the process of negotiating with Asian Development (ADB) for a loan of $22.7 million to finance a portion of the second **lignite-fired generating plant** (75 MW) at Mae Moh. Procurement will include: 75 MW turbo-alternator with auxiliaries; 310 tons-per-hr. cap. steam generator with auxiliaries; electrical equip., e.g., transformers, switchgear, measuring and control equip., and control centers; secondary machinery and appliances for operation and maintenance of above equipment. Total cost of project is estimated at $34.5 million. Scheduled to be completed by end of 1978. OPIC.

☆ U.S. Government Printing Office: 1975, 582-691/25

Commerce Department Directory

Commerce Building, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230, (202) 783-9200

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ARTHUR T. DOWNEY, Bureau of East-West Trade

LAWRENCE A. FOX, International Economic Policy

JOHN P. KEARNEY, Ombudsman for Business

WILLIAM A. NEWDICK, Acting, Office of Field Operations

DISTRICT OFFICES

ALBUQUERQUE, N.M., 87101, Room 316, U.S. Courthouse (505) 766-2386.

ANCHORAGE, 99501, 632 Sixth Ave., Hill Bldg., Suite 412 (907) 265-4597.

*__ATLANTA,__ 30309, Suite 523, 1401 Peachtree St., NE. (404) 526-6000.

BALTIMORE, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.

BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. (205) 325-3327.

BOSTON, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

BUFFALO, N.Y., 14202, Room 1312, Federal Bldg., 111 W. Huron St. (716) 842-3208.

CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.

CHEYENNE, WYO., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2151.

*__CHICAGO,__ 60603, Room 1406, Mid-Continental Plaza Bldg., 55 E. Monroe St. (312) 353-4450.

CINCINNATI, 45202, 8028 Federal Office Bldg., 550 Main St. (513) 684-2944.

CLEVELAND, 44114, Room 600, 666 Euclid Ave. (216) 522-4750.

COLUMBIA, S.C., 29204, Forest Center, 2611 Forest Dr. (803) 765-5345.

*__DALLAS,__ 75202, Room 3E7, 1100 Commerce St. (214) 749-1515.

DENVER, 80202, Room 161, New Custom House, 19th and Stout Sts. (303) 837-3246.

DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Walnut St. (515) 284-4222.

DETROIT, 48226, 445 Federal Bldg. (313) 226-3650.

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